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THE

# Florist and Pomologist:

A PICTORIAL MONTHLY MAGAZINE

OF

FLOWERS, FRUITS, AND GENERAL HORTICULTURE.

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THOMAS MOORE, F.L.S., AND WILLIAM PAUL, F.R.H.S.

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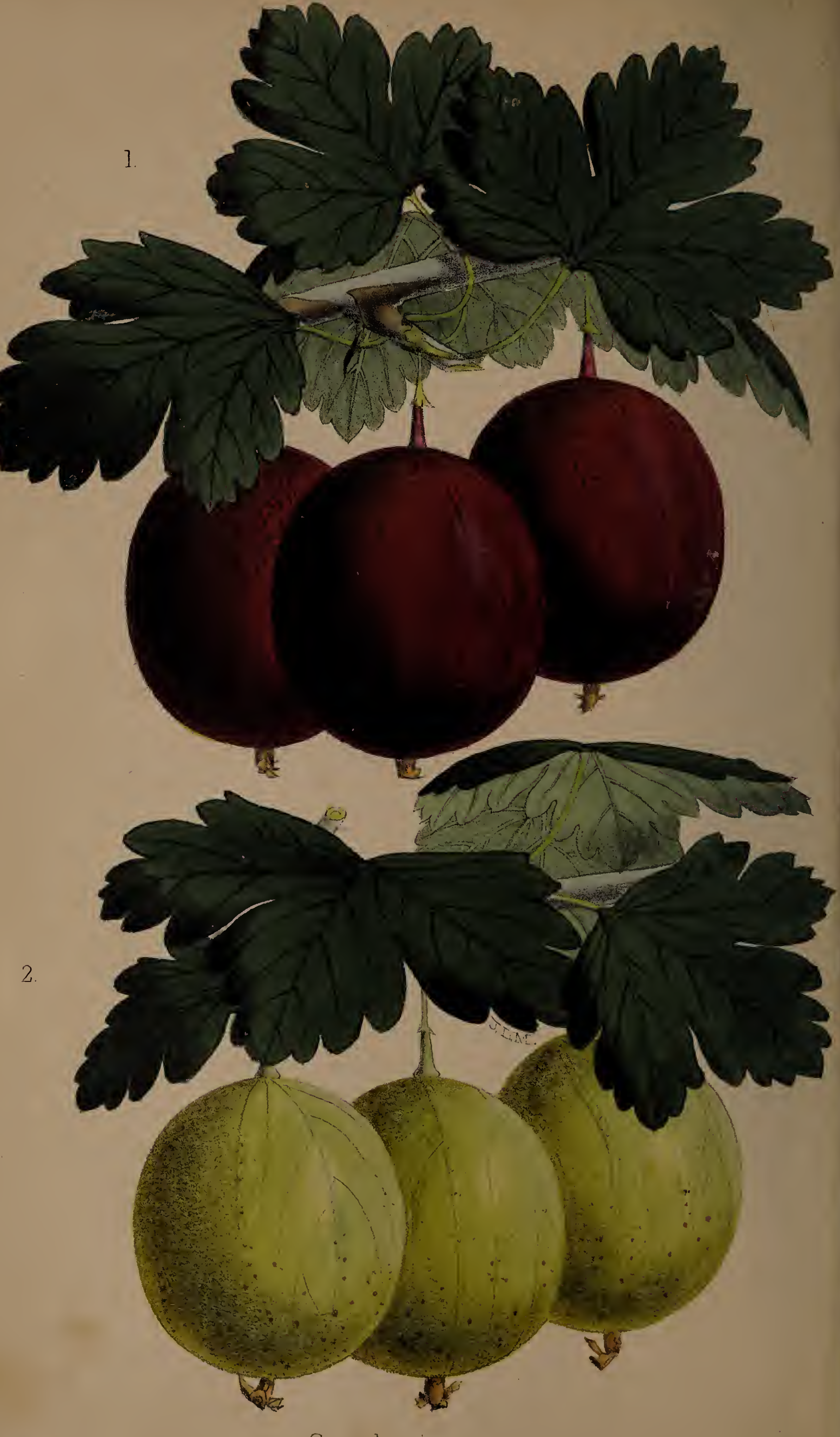


Gooseberries
1, Lord Derby. 2, Victory.

J. L. Macfarlane Del et Zinco
F. Waller Imp

THE

# FLORIST AND POMOLOGIST.

## NEW GOOSEBERRIES.

WITH AN ILLUSTRATION.

THE Gooseberries of the Lancashire growers have long been famed for their great size, but an impression is abroad that they are inferior in quality as dessert fruit. This, however, is a false conclusion, so far as many of the varieties are concerned; and with a view to demonstrate this, we have selected, from a number of sorts obligingly forwarded to us last season by Mr. C. Leicester, of Crompton Road, Macclesfield, the two varieties here figured, which were certainly quite up to the average as regards the important quality of flavour, while from their size and beauty they rank amongst the choicer sorts grown for exhibition.

**LORD DERBY** (fig. 1) is a seedling of Mr. Leicester's, and is as yet new and little known. It is a fine showy fruit of the hairy-red class, bright and telling in colour, and brisk as well as rich in flavour; in every way a first-class fruit. **VICTORY** (fig. 2) is less novel, but is a first-rate variety amongst the whites. The former has been grown as heavy as 22 dwt. 11 gr.; the latter has reached to 17 dwt. 10 gr.—T. MOORE.

## CULTURE OF AZALEA INDICA.—I.

THERE are few plants more generally grown or more worthy of cultivation than the *Azalea indica*, and yet how seldom do we meet with it really well managed, how often with starved stunted growth and small colourless flowers, that render it a difficult matter to distinguish the variety by the appearance of the flowers! This is more attributable to the amount of bad treatment the plants will bear, than to any great difficulty in their culture. It is true that they are particularly liable to the attacks of thrips and red-spider, and all who wish to grow and flower them in anything like a satisfactory manner must make up their minds to wage a war of extermination on these particular insects, otherwise success will never crown their labours.

The Azalea being indigenous to the hill regions of India, we are at once pointed to the necessity of a humid atmosphere, as well as to plenty of light, during its season of growth. I have seen them grown in loam and sand, but they never are so fine, nor do the plants last so long, as when grown in good peat,—not the hard poor material we often see them in, but peat that is rich in the fibre of grass or fern-roots, with one-sixth of clean sand added. The peat must not be sifted, but broken by hand into pieces of the size of acorns for small plants, and as large as pigeons' eggs for larger plants. Another practice with many growers, and which is fatal to the plants ever producing large highly-marked flowers, is that of turning the plants out-of-doors during the season of their growth, or before the wood is fully matured. In truth they are much better never turned out at all. Plants that are in the hard stunted condition indicated, can rarely be brought into free growth, and even when they can be induced to move freely, they generally are short-lived, often going off like a human being in an apoplectic fit. There is no time better than the present for procuring plants to grow on, for if got at once, and placed in a temperature of 50° by night with a little higher by day, they never lose so much leaf, and consequently root, as plants that are kept cooler during the winter. If the object is to get the plants up quickly in size, the flowers should be taken out, to throw all the energies of the plant into the formation of wood. In selecting the plants see that they are quite free from white or brown scale. Any that are so affected are only fit for the rubbish-heap, as they are not worth the trouble of cleaning. If there is a trace of either thrips or red-spider, dip them in strong tobacco-water three times at intervals of ten days, to destroy both insects and eggs. By the end of February they will have pushed considerable growth, and be commencing to root. They should then be potted into pots three inches larger than those they have previously occupied.—T. BAINES, *Southgate.*

## POINSETTIA PULCHERRIMA.

THIS grand old plant, even now unsurpassed as an autumn and winter ornament to our stoves, is, from its refractory habit, too often an example of the term 'leggy.' This bad habit, however, may be conquered by taking it in time. To succeed in growing this plant well, it is absolutely necessary to begin at the beginning, which stage I set at the fall of the bracts. At this period the plants are too apt to be thrust into any corner out of the way, while, on the contrary, they should be fully exposed to all the light they can get; and moisture must be gradually reduced, that the wood may become thoroughly ripened, after which they may be stowed away for a three-months' rest in a cool house, free from damp.

About April the plants should be cut back to the old wood, shaken out from the old soil, and repotted in small pots in good old rotten turfy loam, with a small portion of leaf-mould and sand. A very gentle warmth soon induces them to break freely and need more pot-room, when a small proportion of rotten dung should be added to the compost. As soon as established, the best place for them is a cold pit, giving an occasional shift as required, allowing full exposure to the sun, giving plenty of water both overhead and at the root, and admitting abundance of fresh air as the heat of summer increases. As soon as the shoots are long enough, they must be constantly tied down, choosing a sunny day for the operation, as the shoots are then not so liable to snap. If this operation is neglected at this stage, good-bye to well-formed plants.

An important point in the management now follows. As the summer heat declines, the pit must be kept gradually warmer, until the heads begin to show for bloom, when the plants must be removed to the stove, and still be liberally treated, to bring the bracts to perfection. The *Poinsettia* is a gross feeder, and should not be allowed to flag, or the leaves will fall. The beauty of the plant depends in a great measure on the presence of abundant healthy foliage to set off the gloriously-coloured bracts.

The so-called white variety is useful as a contrast, and flowers rather later than the species. It does not appear to be generally known that plants from seed sown in spring will flower in the autumn by allowing them to run up a single stem without a check. I find the seedlings vary in shade and foliage, and I anticipate further improvements. Both Messrs. Veitch and Mr. Bull are sending out distinct and useful varieties, one earlier, the other later than the type; and I see no reason why we should not produce striped or mottled varieties, by impregnating the red with the white, and *vice versâ*.—J. W. LAURENCE, *Farnham Castle.*

## ORCHARD-HOUSES AND THEIR PRODUCE.

ONE more paper will exhaust my subject, and I will devote it to a detail of a year's course of culture and its results.

I will commence with November. Nothing remains in the house but the late grapes. The trees are again bare, and every wet and uncomfortable day is devoted to their pruning and arrangement. The sap being down, water is altogether withheld, and everything goes into its winter rest. Then comes the important process of mulching, which *here* means a heavy dressing of the strongest unfermented manure I can command. I use the scrapings of a large farm-yard where only corn-fed cattle are stalled; old hot-bed refuse is not sufficiently effective. Early in January the fruit-buds begin to swell, and with the starting of the wood-buds into life, I realise the coming advantage of the mulching, for the surface-roots, by luxuriating in the rich food prepared for them, occasion such a rapid circulation of sap, that every bud becomes a shoot, establishing by its rapid growth a health and luxuriance which defy the aphis tribe, and save all the trials of washing, fumigating, and hand-picking.

I now give the first watering through fine-rosed watering-pots. The quantity is moderate, and just enough to moisten the surface. A fortnight later the whole surface of the house must be saturated. At this stage special attention must be paid to ventilation, and until the young fruit can be pronounced safe, the front sashes must never be opened; and when they are, attention is required to prevent the mischief of the cold draughts which accompany a suddenly overcast sky in the spring months. Daily syringing is indispensable to prevent the ravages of the red-spider, and to furnish the atmosphere which all trees grown under a fixed roof require.

And then comes the harvest. From the Strawberries of May to the Victoria Nectarine (Rivers) of September 29th, I am never without fine fruit in full abundance. My crop of 1873 will substantiate this, for besides furnishing daily supplies for the house, and many presents in the village, I packed and sent away 38 baskets of Peaches and Nectarines. I must not unreasonably attempt a register of the many extra advantages to both gardener and amateur of a good Orchard-house, nor speak of pot-culture, but I may supply an omission in my last hastily-written paper. When speaking of the Grape crop, I had forgotten two trees trained on bare stems to the top of the house, and not interfering with the peaches, from which I took about 120 bunches, making my whole crop above 200.

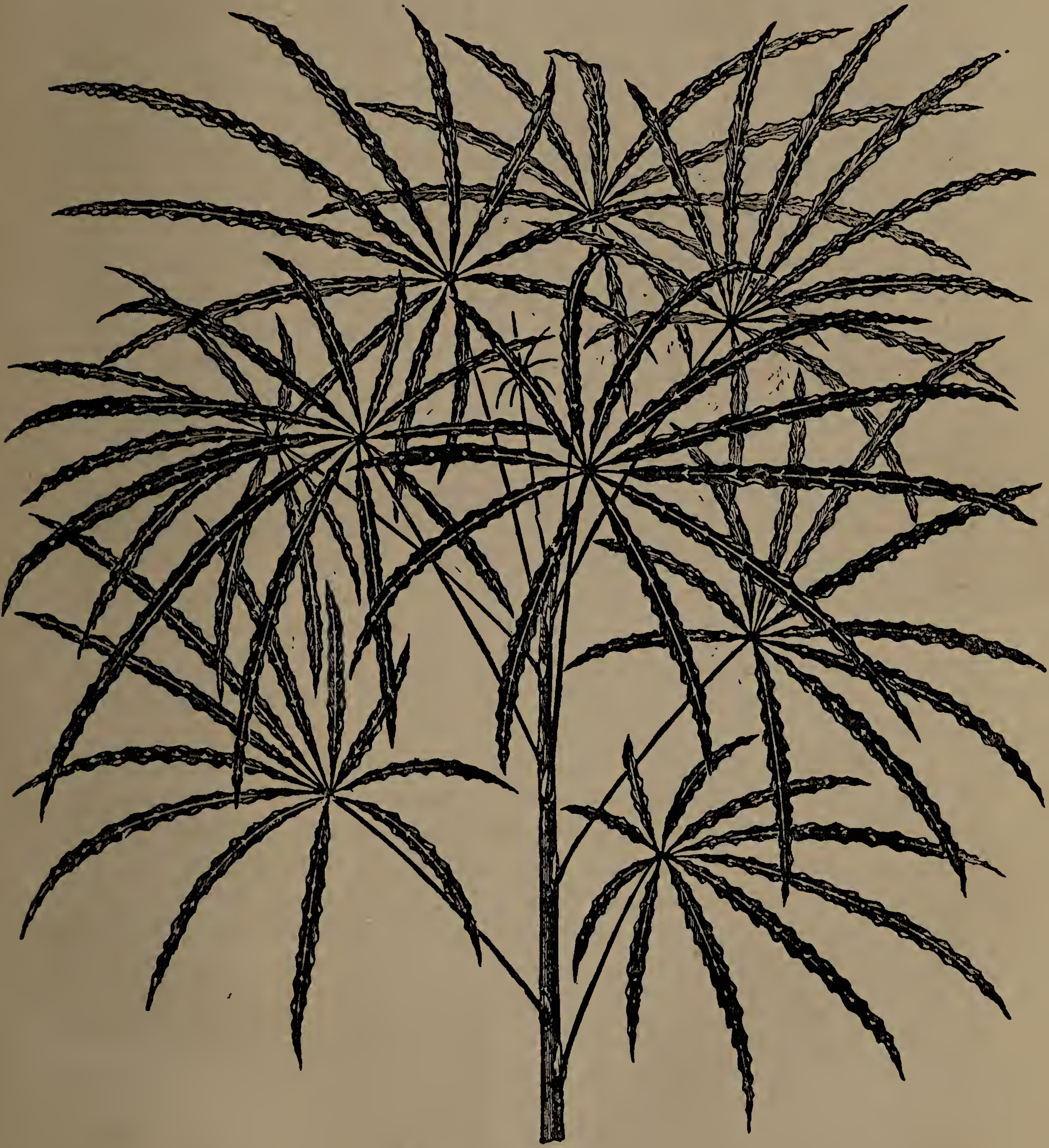
And now, in winding up the matter, I would place these facts against the assertion of a recent correspondent, "M. T.," that orchard-house fruit can be bought for what its culture in these structures costs. Calculating on a coat of paint once in three years, I cannot estimate the expense of my house at more than £3 a year, which the Strawberry crops would discharge or the Grapes pay three times over. Still I admit that great attention is required before a new theory can be worked out, which becomes a medium of the two recognised systems of choice fruit-culture in Peach-houses and on open walls.—G. D.

## CARPETING ROSE BEDS.

SHOULD Standard Rose-beds be carpeted during the summer? This is a question sometimes asked, and is answered both in the affirmative and negative, each side having its adherents. Then, many rosarians, as they are termed, inveigh strongly against Standard Roses altogether, as unnatural in appearance, somewhat contemptuously denominating them "mops," and asserting that their naked straight stems are unsightly objects in the garden. I saw a country flower garden not long since with its inevitable lines of Standard Roses planted in the turf by the sides of the gravel walk, but with a small circular bed at the base of each. In these beds had been planted various coloured Ivy-leaved Pelargoniums, which were trained up the stems of the Roses, and so furnished them with pillars of leaves and flowers. The association of the Ivy-leaved Pelargonium with the Roses in this fashion quite hid the naked stems from view; and I failed to perceive that the Roses suffered in any way from the companionship of the Pelargoniums, as the heads were of vigorous growth and blooming freely. The Pelargoniums had rooted into the superficial rich soil, and their roots seemed to be close to the surface at a higher level than those of the Roses. I was informed that this combination is worked out each year, without inflicting any perceptible injury to the Roses.—R. DEAN, *Ealing*.

## ARALIA VEITCHII.

ONE of the most charming of stove plants of the ornamental-foliage class, and one which seems likely to remain somewhat scarce, from being difficult of propagation. It was imported some years since from New Caledonia by Messrs. Veitch and Sons, and has been frequently exhibited by them, receiving numerous medals and certificates of merit. As will appear from our illustration, which has been kindly lent us by Messrs. Veitch, it is a plant of most elegant character, having a slender-growing erect stem, which is furnished with handsome digitate leaves composed of about eleven narrow linear elongated leaflets, which are distinctly wavy at the edge, of a dark glossy green colour on the upper surface, and dark red beneath. These, standing out on their long slender, but rigid petioles, have a remarkably elegant character.



Aralia Veitchii.

As an exhibition foliage plant, the Messrs. Veitch observe, that there is no doubt it will always stand in the highest rank; while as a dinner-table decorative plant, it is probably without a rival. Though not a rapid grower, it thrives in a warm stove temperature under the treatment usually given to the less robust of choice woody stove plants.—T. MOORE.

## BERRY-BEARING PLANTS.

THERE are few plants more welcome than these for purposes of winter decoration, and they have the additional attraction to many of being easily cultivated. We have many hardy trees and shrubs in our gardens which are strikingly handsome in fruit, and although their fruit does not, botanically speaking, come under the term here employed as a heading, still it is sufficiently precise for all practical and ornamental purposes. As out-door berry-bearers, I may instance the *Arbutus*, a shrub of which, in the Brompton Cemetery, is now covered with fruit; and these being of a bright orange, tinged with bright red or scarlet, are very effective as seen contrasted with the dark glossy foliage. *Hollies*, *Snowberries*, and *Yews* are too well known to need much comment, while *Aucubas*, if a little care and attention be given them when in flower, may be made very fruitful even out of doors, while in pots for cool conservatory or drawing-room decoration they are strikingly beautiful. Even without fruit they are among the best of all plants for the winter decoration of window-boxes and balconies outside town houses. If fruit is desired on bushes planted outside, it is necessary either to place a male plant in flower in close contiguity when the female plants are blooming, in order that they may be fertilised, or a branch of a male plant can be grafted on to the female, so as to serve the same purpose. Growing the male plants in pots is, however, the best plan, as then their season of blooming is more under control, and can be more readily regulated to suit the blooming season of the females.

Several species of *Berberis* fruit freely, and form noble objects on the margins of lawns or in the shrubbery borders. *B. Aquifolium* bears dense clusters of purple berries covered with a beautiful blue bloom; and its still more effective, deciduous congener, *B. vulgaris*, bears elegantly-drooping clusters of scarlet berries, useful either for grouping along with autumnal foliage, or for preserving in syrup for garnishing purposes. Many of the large-fruited species of *Cratægus*, *Pyrus*, and *Cydonia japonica* are amongst the most effective of out-door decorative plants, especially during the few bright sunny weeks in autumn, when the foliage is changing from green to gold. The last-named plant, and the *Cotoneasters*, such as *C. microphylla* and *C. Simonsii*, are well adapted for covering the bare front walls of town houses.

Mr. Barr kindly gave me a hint the other day, the worth of which is simply invaluable to those who are interested in the culture of plants in towns:—"Always choose plants with bright, glossy foliage, as they do not retain the soot and other mechanical impurities of a city atmosphere, and are washed clean by every passing shower." Inattention to this simple rule has been the cause of disappointment to many town planters, especially with respect to evergreen shrubs and conifers.

For indoor winter decoration we have a whole host of bright-berried plants, including *Solanums,* as *S. Capsicastrum*, *S. pseudo-Capsicum*, *S. Yellow Gem*, and one or two others. The cotoneaster-like *Pernettyas*, as *P. microphylla* and *P. mucronata*, are well adapted for pot-culture, and are highly commended by the few who cultivate them for conservatory decoration. *Rivina lævis* (*humilis* of gardens) and the scarlet-fruited *Ardisia*, together with its yellow-fruited variety, are well known as warm greenhouse or stove plants. The pretty little *Nertera depressa*, which in habit reminds one of a plant of *Selaginella densa*, covered with coral beads, spreads rapidly in a cool, genial atmosphere, and does well in a Wardian case in the sitting-room. *Leucocarpus alata*, with white berries, *Callicarpa purpurea*, and even the ordinary scarlet and yellow-fruited Capsicums, may be grown for producing an agreeable variety.—F. W. Burbidge.

## CELERI TURC AND ITS ALLIES.

THE account of this Celery in the Florist and Pomologist (1873, p. 284,) is entirely wrong. It is not *Tuke's* Celery, but what I have named it in the heading, *Céleri Turc*. Forty years ago, and many years subsequently, it was distributed by the Royal Horticultural Society among their annual collections of seeds. The English synonym was *Lion's Paw*, from the leaf-stems being flat and fleshy, and very much divided at the top. I knew it full forty years back as being grown by my late father; indeed, up to the introduction of Cole's superior variety, he grew nothing else, and few men grew Celery better, both on the single-row and bedding system.

The *Incomparable* which Mr. Turner of Slough distributed is not *Céleri Turc*, though it is, no doubt, a selection from it, being less flat in the leaf-stalk, with more heart, and consequently a better keeper. *Céleri Turc* did not keep well, being very liable to rot, but in point of crispness, freedom from thread, and rich nutty flavour, it had and has no superior. For stewing our German *chef de cuisine* would take no other, and he cooked it entire, without being cut into lengths, as is the usual custom.

*Carmichael's Celery*, as shown in November at South Kensington, is the most like Céleri Turc of anything that I have seen for some years past, except that it is some three or four inches too tall. Of the very shabby lot shown, this was certainly the best, and for family use it is, I think, a very promising variety, about intermediate between Céleri Turc and Cole's Crystal White.

The Nottingham growers—working-men, I mean—have some varieties of Celery, and the best of them grow it in a much superior manner to anything we see at the Metropolitan Shows. The secret of superior Celery-growing is to sow seed at the right time, and to suffer the plants to know no check until they have arrived at full maturity. The Nottingham artisan, who wants Celery to show the first week in October, sows the first week in April, on a slight hot-bed, with the protection of glass. His plants know no check, and he rarely fails to bring them up perfectly blanched and weighing from 4 lb. to 7 lb. per head at the annual fair on October 3. Hundreds of gardeners sow in January, and huddle the plants together until they are as weak as straws, to their own and the plants' inconvenience; these, in point of size and quality, are not so forward as those sown at a much later period, but allowed to have no rest afterwards.

The *Celeri Turc*, for both salad and kitchen purposes, I have dug in good eatable condition every week in the year.—WILLIAM P. AYRES, *Brockley Iron Works*, *New Cross*, *S.E.*

AT page 284 of the last volume you remark:—"A dwarf white Celery, known as *Tuke's* Celery, was growing at Gunnersbury some quarter of a century since, and since that date has been grown as the Incomparable." My object in writing is to call attention to the name "Tuke," which is evidently a corruption of the French name "*Turc*,"—for as *Céleri Turc* it was distributed for many years by the Horticultural Society. One thing is certain, that Dr. Tuke, who lives near Gunnersbury, had no more to do with its paternity than I have. This, the finest of all white Celeries, comes to us from France. It is the favourite variety of the Paris market-gardeners, and is grown under the names of *Céleri Turc*, *Céleri Court Hâtif*, *Céleri Plein Blanc Court Hâtif.* Its English names are Dwarf White Solid, Dwarf White Solid Self-blanching, Incomparable, and lastly, Sandringham. Of Red Celeries there are no better than Major Clarke's Solid Red and the Leicester Red. I have not had an opportunity of growing these two celeries side by side, so cannot tell if they are distinct, but I can say that with either you have the best Celery that can be desired.—B.

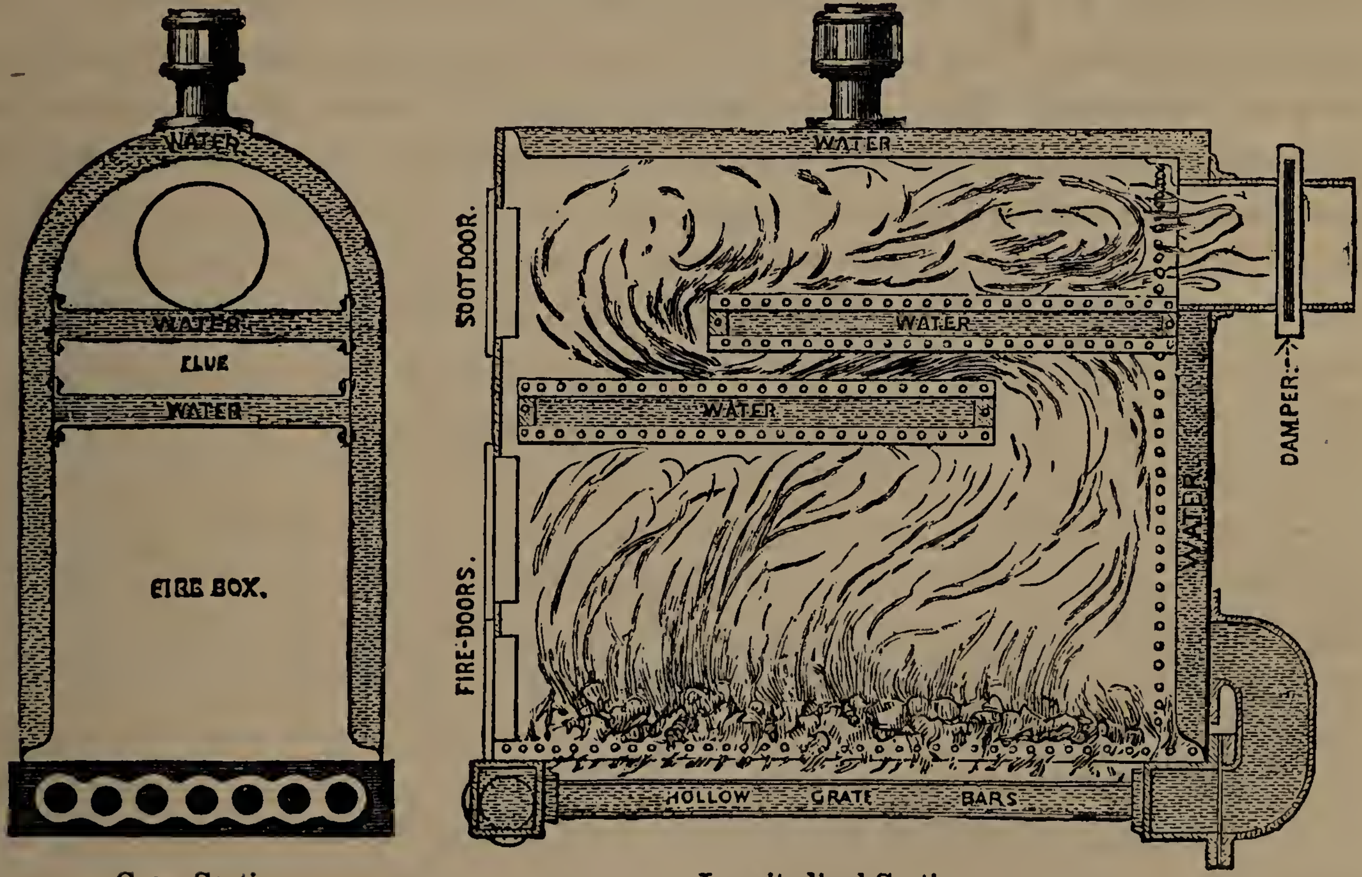
## SUGAR PEAS.

THERE are Sweet Peas, but these are not the Sugar Peas,—one is a delicious vegetable, and the other an ornamental flower. The pods of the Sugar Peas are eaten when very young, just as the pods of French Beans and Scarlet-Runners are eaten. About the year 1826 I busied myself to get Sugar Peas forward, and they were forwarded in V-shaped boxes, and put into the rows out-of-doors as soon as the weather would permit, and they were fit for table just about the time that French Beans were appearing above the ground. It will need little ventilation of the subject to start lady housekeepers to ask for Sugar Peas early, and not only early, but at any time, for they are far more palatable than either French Beans or Scarlet-Runners. In Dickson and Robinson's (Manchester) *Catalogue* now before me I see they quote an edible-podded Pea called *New Dwarf Wrinkled edible-podded,*—evidently showing that the thing has not quite died out. One would have expected that the great Show at Manchester would have brought this fine old vegetable on the table, but I looked in vain for my old favourite. If the pods are gathered when quite flat, and before the seeds are formed, they will be indeed sugared, but if allowed to go to seed, they are useless for table, for they are not of any value as Green Peas.

The talented author of *Nicholas Nickleby* ate Pea-pods in Germany, and recommended the novelty to housekeepers in England, and got heartily laughed at for supposing that all Pea-pods were eatable. Dr. Lindley quenched the rising idea, and, therefore, I need not say a word on the subject, for "what so tedious as a twice-told tale." I name it here to show that our Continental neighbours are in the habit of eating Sugar Peas, and of offering them to strangers, and we might do worse that copy such a sensible notion.—Alex. Forsyth, *Salford.*

## GREEN'S PATENT WROUGHT-IRON BOILER.

SUCCESS is truly said to be the test of merit; and this being so, the Boiler of which we now give an illustration must be noted down as a meritorious one, since it has certainly proved to be successful. It has now been for some time in use in the garden of the Royal Horticultural Society at Chiswick, where, if we are not misinformed, it has proved itself to be the best boiler in the establishment, and has certainly given the fullest satisfaction to those who have introduced it.



Cross Section. Longitudinal Section.

Green's Patent Wrought-iron Boiler.

The principle of the boiler will be at once understood from the accompanying figures, which show the longitudinal and cross sections. The fuel rests on hollow water-tubes, which form the fire-bars, and the heat and smoke pass upwards and backwards, through a narrow, horizontal flue between two thin, overlapping water-plates or shelves, as they are termed, and again return over the top of the upper shelf, and beneath the arch of the boiler, to the chimney. The soot-door is conveniently placed for keeping the flues clean, which is a matter of no small importance. The flow is from the crown of the arch, while the returns come in on each side, close beneath the fire-doors in front. It will thus be seen that this wrought-iron boiler—a class now in popular favour—is simple in principle, and we can vouch for its successful action in the establishment above referred to.—T. M.

## THE VARIETIES OF GARDEN KALE.

THE following is an abstract of Dr. Hogg's Report of the Kales grown in the Garden of the Royal Horticultural Society at Chiswick during the years 1871-72, which was a tolerably complete trial of the varieties now in cultivation. In reference to the errors of nomenclature discovered, it is remarked that no blame is attributable to the seedsmen, nor any impeachment of their good faith, on that account; for the confusion of nomenclature has existed, not only for years, but for generations, and however anxious they may have been to correct it, the task was one most difficult of accomplishment. Now, however, that something like order has been attained, it is to be hoped that a more general concurrence in nomenclature will be maintained.

ASPARAGUS KALE.—The original Asparagus Kale of a century and a half ago was a Sprouting Broccoli introduced from Italy; it received its name from the young shoots, terminated by a "button," bearing some resemblance to the young shoots of Asparagus. In course of time, the name gradually ceased to be identified with the Sprouting Broccoli, and was applied to a variety of kale also introduced from Italy, called *Milan Kale*, or *Chou de Milan*, which has the property of throwing up in the spring a profusion of long succulent shoots, resembling the shoots of Asparagus. There are now several other varieties of Kale to which the name is sometimes erroneously applied by seedsmen, *e.g.*, *Buda Kale*, *Couve Tronchuda*, and *Siberian Kale*.

BUDA KALE.—This is one of the varieties called Asparagus Kale. It is very dwarf-growing, the stock being not more than 6 in. high, and very leafy. In this condition it remains all the winter, and in spring numerous long shoots are produced, some of which are from 2 ft. to 2½ ft. in length. The leaves are smooth and very much waved. There are three varieties of this—the *Green*, the *Purple*, and the *Lettuce-leaved* or *Strap-leaved*. There is no difference, except in colour, between the green and the purple varieties, but the lettuce-leaved is very distinct, the blade of the leaf being decurrent down the whole length of the footstalk, resembling in that respect the leaf of a lettuce, or of Laing's Swedish turnip. As regards utility and fertility, there is no difference; and all are equally hardy. The purple variety was sent in by different seedsmen as *Asparagus Kale, Delaware Kale*, *Jerusalem Kale*, and *Purple Jerusalem Kale.* The green variety was sent in as *Lapland Kale*, *Egyptian Kale*, *New Winter Kale*, and *Chou-à-faucher*. The Lettuce-leaved variety was sent in as *Jerusalem Kale.*

COTTAGER'S KALE.—The Cottager's Kale seems to preserve its undisputed individuality, as there were no instances of this excellent variety being received under any other name.

Curled Kale.—By far the most popular and most extensively cultivated of all the Kales are the Curled or Scotch Kales, also called Curlies, German Greens, or Borecole. There are four distinct forms of the Curled Kale—the dwarf and tall green curled, and the dwarf and tall purple curled. Those which are most generally cultivated are the green forms; and the great object of cultivators is to obtain these with the leaves as finely and as much curled as possible; and in proportion as they are so, the more or less is the stock appreciated. The green form was received as *Prince of Wales, Hearting Kale, Cabbaging Kale, Tall Curled*, *Sclater's New Cabbaging*, *Feathered Scotch*, *Abergeldie*, *Superb Parsley Curled*, *William's Matchless*, *Pontefract Green Curled, Tynningham, Jackson's Late Curled*, *Dwarf Green Curled Handsworth*, *Veitch's Dwarf Late Curled*, *Dwarf Green Curled Canada*, *Dickson's Imperial Dwarf Curled*, and *New Moss Curled.* These differed only in the degrees of intensity with which the leaves were curled, the *New Moss Curled* being the most remarkable. The dwarf purple form was sent as *Jerusalem Kale* and *Lapland Kale*, and the tall purple as *Brown Borecole.*

Jersey Kale.—This is the *Cesarean Cow-cabbage*, *Tree-cabbage,* and *Jersey Borecole*, a tall-growing plant, 4 ft. or 5 ft. high, the stem clothed with long, broad, glaucous-green leaves with long foot-stalks; in spring it throws out numerous long slender shoots, with which cattle are fed, but it is never grown as a garden vegetable.

Long Scotch Kale.—This is the normal form of the wild cabbage as it is found on the Dorsetshire coast. It was also sent under the names of *Couve murciana* and *Buckman's Hardy Winter Greens.*

Marrow Kale.—The *Chou moellier* of the French is a form of Jersey Kale, which produces a long thickly-swollen stem like a gigantic cigar, the swollen part being filled with a mass of tender pith. There are three varieties, the white, the purple, and the small. The white grows about 4 ft. high, the stem being thickest in the middle, where it is about a foot in circumference in the largest specimens.

Milan Kale.—This is often called *Chou de Milan*, which is unfortunate, as *Chou de Milan* is the name given by the French to Savoys, between which and the Milan Kale there is no resemblance. The Milan Kale produces a stock from 18 in. to 2 ft. high, clothed with plane bluntly-toothed leaves, and terminated by a close rosette of leaves forming a small incipient head. In spring it throws out a large quantity of fine succulent shoots, which, when cooked, form one of the most delicious dishes of the winter-green class; and it is from this circumstance that the plant has been called *Asparagus Kale.* There is a purple variety which was received under the name of *Flanders Purple.*

Palm Kale.—The stem is 2 ft. to 2½ ft. high, clothed with large oblong-obovate leaves, having the blade decurrent the whole length of the footstalk, and which are of a dark-green colour, and curve gracefully upwards and outwards, giving the plant the aspect of a miniature palm. In the spring it throws out a profusion of long slender shoots, which are of no value as a vegetable. It was received under the name of *Chou Palmier*.

RAGGED JACK.—Like the Cottager's Kale, this seems to have few synonymes. Its character is sufficiently distinct to render it easy of identification, being very dwarf, with a stock not more than 4 in. to 6 in. high, and having the leaves deeply laciniated, the segments trifid or multifid. It is generally of a purple colour, but occasionally green. In the spring it produces a great quantity of tender shoots, which are much esteemed as a vegetable. It was received as *Camberwell Borecole*.

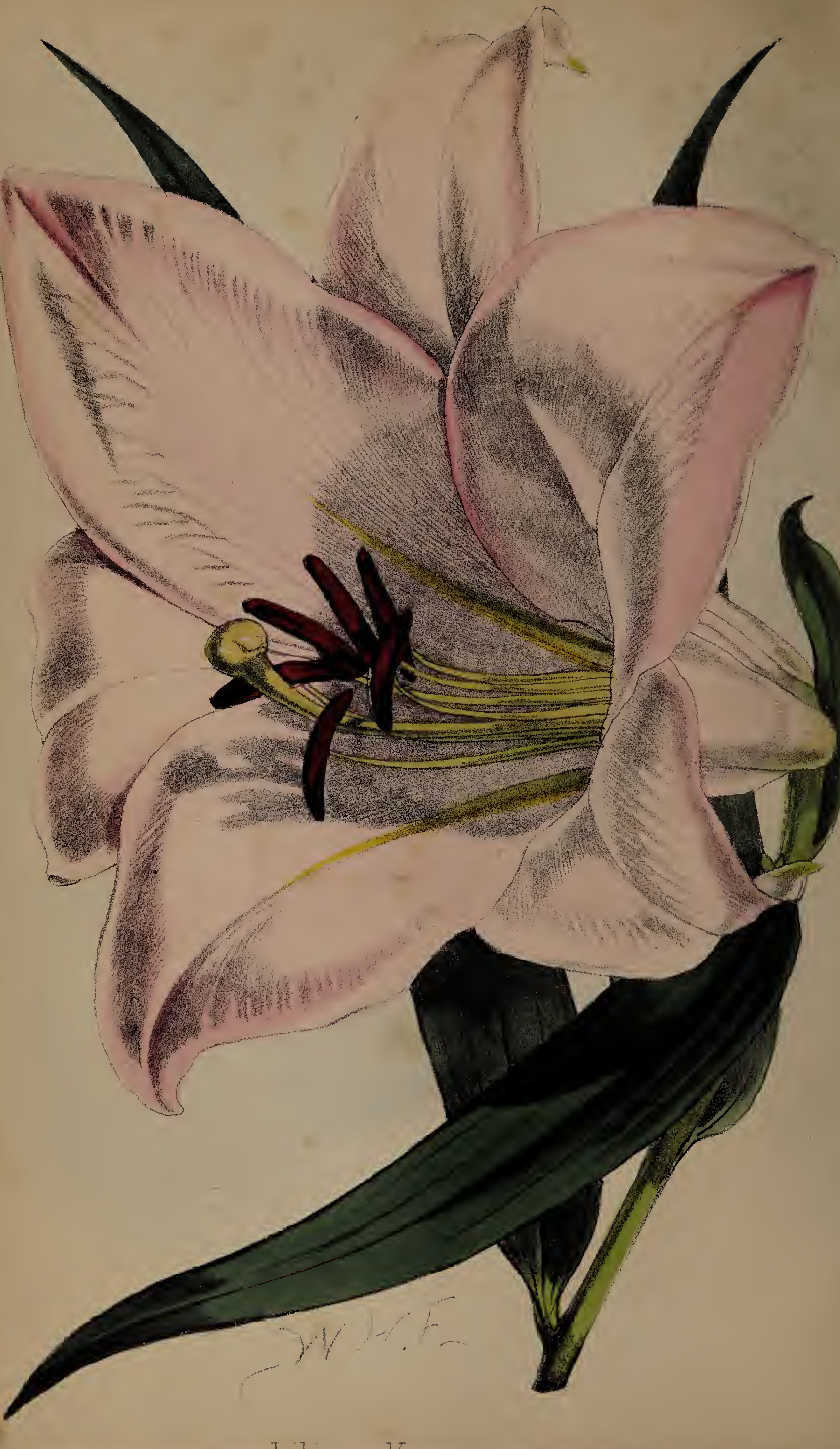
SIBERIAN KALE.—This is one of the hardiest and best of the sprouting kales; it is also very distinct, and can never be confounded with any other variety. The stock is very dwarf, being only 4 in. to 6 in. high. The leaves are always green, sinuated, coarsely serrated, and plaited on the margin. In spring it produces a large crop of tender shoots, from 1 ft. to 15 in. in length. The nomenclature of this variety is very confused. It was sent in as *Lapland Kale*, *Asparagas Kale*, *Buda Kale*, *Delaware Kale*, *Jerusalem Kale*, *Acme Kale*, and *Curled Jerusalem*.

WOBURN KALE.—This closely resembles the Wild Cabbage and Long Scotch Kale, but appears to be of a more perennial character. It may be propagated by cuttings, as, indeed, may all the other varieties; but it is more woody and shrub-like in its growth. It is not worth cultivating for its produce, except in very northern and exposed situations, but it is very hardy, and will, perhaps, stand more rigorous winters than any of the other varieties.

## TECOMA (BIGNONIA) GRANDIFLORA.

THIS magnificent Chinese climber is deserving of much more extended cultivation than it receives. Considering its hardiness, freeness of growth, and flowering, and the great beauty of its inflorescence, it cannot be too highly recommended. It is sufficient to say that it produces the largest and most effective flowers in one of the most beautiful genera of flowering plants that we possess. Trained upon a wall or on trellis-work, its flowers are progressively produced in immense panicles during the autumn months; and I have measured several of its large red blossoms, which were 4 in. across the throat of the tube. Whether planted against a wall or a trellis, it should, as soon as it has covered the space allotted to it, be annually spurred back to an eye, before the growth breaks in spring, and the chances of severe frosts are over. If the soil is well drained, and of a fertile nature, there needs no preparation for planting, as the *Tecoma* is by no means fastidious in this respect; but when the subsoil is at all wet, it must be thoroughly drained, substituting a healthy turfy loam to plant in. Perfect drainage is one of the chief elements of success with all such subjects, tending greatly to the insurance of perfect hardiness.

Having so far alluded to the capability of the *Tecoma (Bignonia) grandiflora* as an out-door subject, I must not omit to refer to its admirable appro-



Lilium Krameri.

priateness for conservatory and greenhouse embellishment when cultivated in pots, forming as it does a very distinct and most effective object in association with other plants. If properly fashioned when young, and freely cut back annually, the plants form very compact and shapely bushes, from 3 ft. to 4 ft. in height, without the slightest tendency to ramble; and such plants are often embellished with from twenty to thirty panicles of its large rich orange-red tube-shaped flowers, producing a grand and imposing effect. So freely does this Tecoma produce its blooms, that I have seen hundreds of specimens in 5-in. and 6-in. pots flowering freely, in the nurseries of Mr. Smith, of Worcester, who grows the plant extensively. Under glass cultivation it should receive an abundance of light and air, so as to promote a sturdy habit of growth. There are two varieties of this species,—*T.* (*Bignonia) grandiflora*, with reddish-saffron flowers; and *T.* (*B.) grandiflora rubra*, which is darker in colour, as the name implies.—Geo. Westland, *Witley Court.* [Mr. Waterer, of Knaphill, also grows a variety of remarkable beauty under the name of *Tecoma (Bignonia) grandiflora præcox.*—Ed.]

# LILIUM KRAMERIANUM.

WITH AN ILLUSTRATION.

WE owe our thanks to Mr. G. F. Wilson for the opportunity of figuring this, which is the finest form of the new Japanese Lily, *Lilium Kramerianum.* Three varieties of it have been flowered and exhibited in this country, but not distinguished by name. The finest is that which we now figure, and which has large flowers, with broad bluntish perianth segments, of a deep flesh-colour or pale rosy blush. Another, also blush, but much paler in colour, has narrower perianth segments, wavy at the edge and very much drawn out at the points; this has been figured in the *Botanical Magazine* (t. 6058), but is there too highly coloured. The third is almost white, and is intermediate in form between the other two.

This Lily, when examined by Mr. Baker, was regarded by him as a hybrid between *L. japonicum* and *L. speciosum.* We must confess that we do not see the slightest affinity with the latter species, but think it far more likely to have originated between *L. auratum* and *L. japonicum*, if it be not a mere selection from *L. auratum* itself. It is not quite clear whether *L. Kramerianum* comes to us from wild habitats, or from the Japanese gardens. All we have been able to learn on this point is contained in the following memorandum from Messrs. Teutschel and Co., the agents in this country of Mr. Kramer. They write :—" Mr. Kramer sends it to us as a new lily, obtained a long distance from Yokohama, in the interior of Japan. He speaks of a man as 'collecting' it, and sends it in three varieties—white, pink, and a larger form of the same colour; but adds, 'there are many startling varieties.' He speaks of it as a form of *L. auratum.* For our own parts, we cannot see that speciosum has anything to do with its parentage; it seems a seedling form of auratum. It is a delicate bulb, and travels badly, scarcely one in ten having reached us in good condition. All our bulbs have had narrow elongate foliage like *L. auratum*."

Our figure is necessarily much foreshortened, but gives a fair notion of the beauty of the flowers, and of the character of the leaves. Its erect stems grow from 2 ft. to 3 ft. high, and as yet have borne only solitary flowers.—T. MOORE.

## AKEBIA QUINATA.

THIS is a plant which I am surprised is not more generally planted in England. No hardy climber I am acquainted with looks so well at all seasons of the year, and yet it is seldom met with, even in catalogues. The plant is nearly evergreen, and easily kept within bounds, and if a few wires are placed for it to run on, it will train itself. No insects trouble it; the plants flower abundantly from an early age; they are very easily propagated, and grow fast when young. A plant turned out against my dwelling-house in a south-east corner, about seven years ago, is now a dense mass from ground to roof, although it is a lofty building; and it is completely covered with its curious dark purple flowers in the early spring, the leaves remaining on until after Christmas. I have never seen a shoot injured by frost, even when quite exposed in open ground. The plant is, of course, the admiration of all visitors.

The seed-pods are very curious and ornamental, being like large blue bean-pods; but I have only seen it in seed once, and that was on a small plant in a pot, which had probably been fertilised artificially. As the plant blooms so early in the season, and is diœcious, it may require artificial impregnation if seed is expected. As an instance of its free-blooming quality, I have a number of plants not more than one inch high, flowering in 2-in. pots.—JAMES TAPLIN, *South Amboy, New Jersey.*

## THE MUSCAT ESCHOLATA GRAPE.

FROM what I hear from growers who have seen the above grape growing here this autumn, I conclude it is but little known. Some who saw it said it was the Golden Champion, and in appearance it certainly very much resembles the Champion, as figured in the FLORIST AND POMOLOGIST in 1868, but I am not aware that there is any resemblance in flavour; indeed there cannot be, as the Escholata has a good Muscat flavour, whereas the Champion is not a Muscat at all. One of the good qualities of the Escholata is that it does not spot—it has not done so with us during the three years we have fruited it; and it ripens quite a fortnight earlier than the Muscat of Alexandria in the same house, the berries being considerably larger, and of a beautiful amber tint when ripe. Some of the berries on the last bunch, cut on November 26, were four inches in circumference.

I have read with great interest the notes on the new Grapes recently published in the FLORIST, but I hope some of your readers will give us their experience with the Grape named at the head of this article, as I fear it has got a bad name from not setting so freely as one could wish. We have only one plant of it which carried seven bunches, five of which were quite perfect, the others thin in the middle. Mr. Rivers describes it as the Ryton Muscat; berries large, oval, equal in size; an excellent variety. According to my experience, I should not recommend it to be planted on a large scale,—the Muscat of Alexandria is the best for that purpose; but where a large white Grape is wanted, as a noble companion for the Black Alicante and Gros Colman, either the Escholata or Mr. W. Paul's Waltham Cross (from what I saw of it when exhibited at the Bishop Stortford Autumn Show), may be selected. The fact that the latter is a strong grower will recommend it, as it does the Escholata, which with us is one of the strongest-growing grapes that I know of. I believe this is a step in the right direction, as a vigorous constitution assists the gardener to avoid several of the evils he has to contend with in Grape-growing, namely, spot and shanking; even mildew, I have no doubt arises a great deal from the same cause, namely, a weak constitution.—WILLIAM PLESTER, *Elsenham Hall Gardens.*

## APPLICATION OF LIQUID MANURE.

THE beneficial results obtained from manure-water, when judiciously applied to fruiting and flowering plants, has long been recognised by cultivators, and its use is by them becoming more general. It is well known that the roots of plants are usually more healthy when growing in pure soil free from rank manure, and these roots will draw up more healthy nourishment to the plants from manure given in a liquid state, than when they are encased in rank material which they cannot consume. We know that our most successful grape-growers use very little solid manure in the soil, only a few bones or bone-meal, or similar material, which cannot give off more stimulant than the plants can consume, and also remains much longer in the soil as a fertilizer than manure which dissolves rapidly. Pine-apples are not grown by successful cultivators in that rich stuff so much prized by some of our forefathers. The successful florist has more faith in giving stimulants when the plant really needs them, than in keeping the roots buried in soil made rich and almost offensive by strong manure. When roots are few, and the plants almost at rest, the purer the soil and the less stimulant the plants receive, the better will they thrive when their roots come to draw up larger supplies of nourishment.

It is the application of liquid manure to plants in pots to which I wish more particularly to direct attention. It is a practice of some growers, when they observe plants making slow, unhealthy growth, to give doses of strong manure-water—sometimes in a putrid condition, and the result is, that the plants so treated go from bad to worse; but if the roots were cleared of the unhealthy soil about them, and replanted into healthy material, success might then be expected; and when abundance of roots are formed, so that the pots are well filled, manure might be given at each watering. I strongly object to the advice often seen in print, to give a strong dose twice a week or at some other appointed time, which has the effect of "starving and bursting." Moisture is needed to soften the soil, and to allow the roots to extract nourishment from it; but when all the virtue is out of the earth, and the plant begins to show signs of distress, all the watering in the world will not give vigour to the exhausted functions; but let a portion of guano or any well prepared manure be mixed with the water sufficient to colour it, and let this be repeated at every watering instead of giving a much stronger dose at longer intervals, and the result will be most satisfactory. I have tried a number of experiments this season with liquid manure, and all lead me to have faith in the application of it, at every watering, in a weakly state.

A number of Fruit Trees in pots—chiefly plums—which had not been shifted for years have produced heavy crops of fine fruit, and though there was little in the pots but roots, the frequent doses gave them all they required.

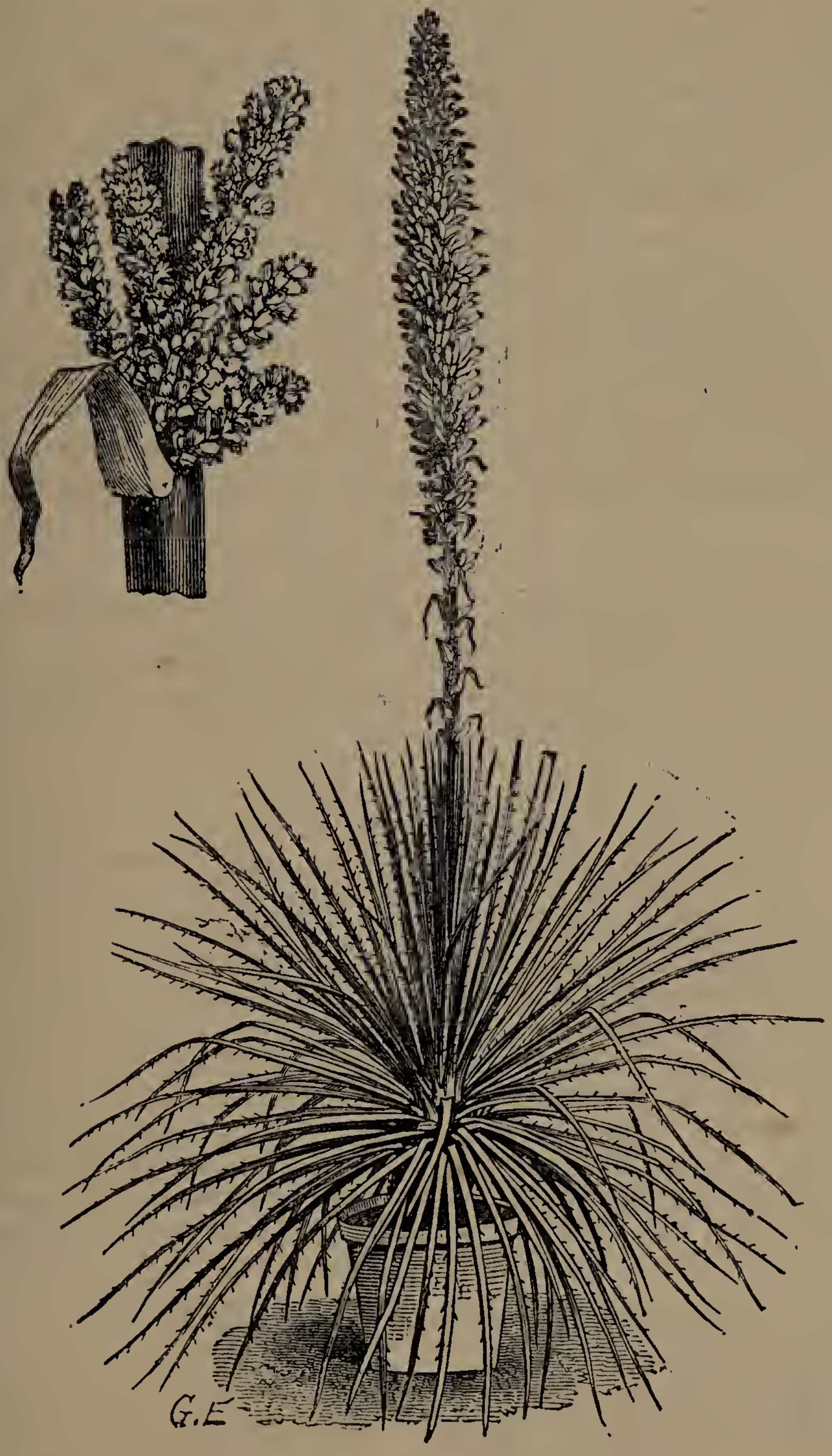
A number of old Fuchsias were stunted and pot-bound, but pressure of more important matters prevented our potting them into fresh stuff; but to each watering a colouring of guano was allowed, and the plants, with their pot-bound roots, have not only made vigorous growth, but flowered freely from June onwards till November.

Some Pelargoniums, which were cut down last season and allowed to break in the usual way, were shaken out of the pots, and placed in smaller ones, but when they should have been shifted they were allowed to remain in the small pots, which were crammed with roots; guano-water was given at all times when they required moisture; the plants grew and made fine foliage, and flowered better than others which were favoured with larger pots and fresh soil.

Many other examples I could give to prove that giving liquid manure frequently, and not till roots are in abundance to consume it, is the proper way to deal with this important assistant of the cultivator. Putrid liquid is a destroyer of the health of plants; it should always be used in a fresh and clear condition, and rather on the homœopathic than the allopathic principle. This is an old story, well known to practical men, but young beginners and amateurs are often led into errors with the advice so often given,—the strong dose "once or twice a week."—M. T.

## DASYLIRION GLAUCUM.

THIS plant, which is also known as *Bonapartea glauca*, appears to us, observes M. Carrière in *Revue Horticole* (1872, 435), to belong to the genus *Dasylirion*, and not to be a *Bonapartea*, the latter having nearly all the characters of the *Agaves*. The plant has a solid stem, recalling that of a *Dracœna*, stout and very short, the leaves widened and imbricated at the base, and covering at the top of the stem a sort of subspherical projection, from the centre of which the inflorescence is developed. The leaves are thick, glaucous, furnished on the edges with very short, distant, and regular teeth, 28-32 in. long, withering at the tip, which is broad or subtruncate. The termino-central flower-stem attains 5 ft. to 6 ft. high, bearing leaves which diminish, so that the upper ones are almost reduced to bracts or scales, and bearing also for two-thirds of its length spiciform erect bunches of flowers, forming a close but ramified inflorescence. The flowers are small, yellowish-white, extremely numerous, with the perianth segments united at the base; the stamens are six in number, with the white filaments terminated by yellowish anthers.



DASYLIRION GLAUCUM.

The *D. glaucum*, of which the cut is here reproduced, is a plant of very ornamental aspect. It flowered, probably for the first time at Paris, at the establishment of M. Rougier-Chauvière about the beginning of August, 1872. It is cultivated in the greenhouse, of which it is a hardy inhabitant, its culture being similar to that of the Agaves. The few other species of Dasylirion met with in our greenhouses are all exceedingly handsome plants of the Yucca or Agave type. —T. MOORE.

## GARDEN GOSSIP.

A STATEMENT of accounts relating to the exhibition of the *Royal Horticultural Society at Bath* has recently been published, from which it appears that a profit of £1,248 17s. 3d. was realised, of which sum the Royal Horticultural Society receive £624 8s. 8d., and the other half is divided amongst the local institutions. The Royal Literary and Scientific Institution Gardens receives £20; the Royal Victoria Park, £302 4s. 4d.; and the Hanoverian Band and Floral Fête Committee, £302 4s. 3d. The Prizes and Medals distributed amounted to £1,312 9s. 6d.

—— IN reference to *Tacsonia insignis*, figured in our last volume, Mr. Anderson, of Sowerby-House Gardens, where it was bloomed, writes:—"Your artist has done the Tacsonia well—rather highly coloured. The true colour is a clear magenta-scarlet. The flowers are from 7½ in. to 8 in. across. After remaining horizontal for a day or so, the flower-segments turn up like those of a dog-tooth violet, and remain so for a day or two, when they again resume the horizontal position, and shortly after fall off. It produces no seed unless carefully impregnated. The fruit is quite round, like a green orange, at present (Nov. 5) not ripe, from 7 in. to 8 in. in circumference. When treated the same as T. Van Volxemi, that is, freely cut back in spring, it flowers a month or six weeks before that variety, and produces mostly two flowers from the axil of each leaf, that is, after it begins flowering."

—— WE have lately seen in the Knap Hill Nursery what we believe is the *fastest-growing tree* in cultivation. It is the *Populus canadensis* (monilifera) *nova*, a new variety of the Cotton-wood. The rapidity of its growth is extraordinary, plants only three years old being now upwards of 20 ft. in height, and forming well made trees. It is a better grower than any other Poplar, has a free healthy habit, and is well worthy of the attention of planters.

—— ONE of the most important of gardening operations is that of *Potting*. Mr. Fish gives the following instructions respecting it:—A stock of clean, dry pots, turfy loam, fibry peat, clean sharp silver-sand, white sphagnum, potsherds, and charcoal should be kept always in readiness, and each plant should be potted as it needs it. I don't believe in a general potting, any more than a general watering. "As they need it," should be the rule, one or few at a time. Nostrums in the way of soil, I also hate; those I have named, simply mixed, will grow anything. The chief point is right mechanical conditions. Food can always be given to plants in their drink. The state of the old ball and the mode of potting have more to do with success than the character of the soil; it should never be too wet, nor too dry. The outer roots, if possible, should be made to point into the earth, and the latter can hardly be made too firm. Give water, to consolidate and amalgamate the old with the new, and to *home* the plant in its new pot, using water always a little warmer than the temperature of the house in which the plants grow.

—— DR. HOOKER communicated to the *Gardeners' Chronicle* some time since the following remarks on the *Production of Honey-dew*:—"I have," he remarks, "carefully watched the first formation of honey-dew in the Lime during this and the preceding two weeks, and am satisfied that its first appearance is wholly independent of insect agency. In each week, on the accession of hot and sunny weather, the upper surface of the leaves, inclusive of those on the extreme branches, become very uniformly speckled with honey-dew, the specks appearing on the tumid spaces between the venules, and seldom exceeding one-tenth of an inch in diameter. These were washed away by the first shower, and reappeared with the returning hot sun. In the first week it was difficult to find an aphis anywhere on these Limes, and such as I found were solitary, very immature, and confined to the lower surface of the leaves. On the extreme twigs, the leaves of which projected some feet beyond the rest of the foliage, and which leaves were equally speckled, scarcely an aphis was to be seen. During the last week and this, the aphides have become more numerous, but are still comparatively rare, and always solitary. That the formation of honey-dew is independent of aphides, and is a function of the plant unstimulated by insect agency, is clear to me; but it remains to be seen whether the aphides may not at a later period induce a more copious secretion of honey-dew."

—— Those who know how sedulously Dr. Maclean tried to get flavour into the Peas, will not be surprised to find that his *Best-of-all* fully bears out what has been said in its favour. It is an excellent main-crop Pea, and however much Veitch's Perfection may be valued, this, it is said, exceeds it in point of flavour. It is of robust growth, about 3 ft. in height, the pods very thickly covering the haulm; the flavour very rich and sugary.

—— When in good bloom, *Spiræa Lindleyana* forms a magnificent bush. *S. ariæfolia* is often spoken of as the most beautiful of its class, but *S. Lindleyana*, with its grand flower-panicles, is a powerful rival to it. The foliage is dark green, large and pinnate; the flower-panicles from 2 ft. to 3 ft. long, nearly pure white, and of the form of a fox-tail, but broader. Imagine a bush with 50 of these spikes, rising 6 ft. to 7 ft., and falling gracefully over the foliage!

—— Amongst the *Bedding Violas*, that called *Blue Bell* is said to be both the earliest and latest to bloom of all the blue varieties; not, perhaps, quite so effective for colour in the summer as Magnificent, but having more blue in its composition, and therefore none the less charming. It is a much more robust grower, and gives a larger quantity of bloom than Magnificent, coming into flower a month earlier and blooming two months later; indeed it continues in bloom from the early spring until the end of the autumn, unless very severe weather should set in. Blue Bell is very hardy, will propagate freely, and is a valuable acquisition either for spring or summer bedding.

—— The *Clianthus Dampieri* is generally considered rather difficult or uncertain to cultivate, but the following account of the treatment of a plant grown at the Poles, recently printed in the *Gardeners' Chronicle*, shows at least that it is worth taking some trouble with. The plant was raised from seed sown early in February, in an ordinary stove. In due time it was potted in a 4-in. pot, using peat and sand for compost; when the plant was well rooted it was pinched back, to encourage it to break, which it did in three places. At this period the stove was getting too warm for it, and it was put near the glass in the Odontoglot-house, and ten days after repotted into a 10-in. pot, using for compost, peat, sand, and a double handful of chopped sphagnum; this latter article proved of great value in keeping the compost both porous and moist, thus preventing stagnation and the too frequent use of the watering-pot. When tolerably established in its large pot it was removed to the east end of a Heath-house, near the glass, where for a week or two it had the shade and protection of a *cloche* afforded it. From the time the *cloche* was dispensed with, the Clianthus grew rapidly and sturdily, enjoying occasionally a pinch of Standen's manure. Early in July the flowers appeared. On July 21 five trusses of five flowers each, and one of two were fully expanded. In this state the plant was taken to the conservatory, where it continued to grow and flower freer than ever, attaining its greatest perfection on September 25, when it had upon it seven trusses of six flowers each, two of five and two of three, in all 58 individual flowers. When seen in this condition Clianthus Dampieri cannot fail to attract attention from the most unobservant of observers.

—— Mr. T. Simpson has recently recommended *Harris's Hybrid Cucumber* as one of the very best varieties for yielding a supply of fruit—a really good and serviceable kind. It is not particularly valuable for exhibition purposes, but, what is of infinitely more importance, it is a good and a continuous cropper either in winter or summer, and is of robust constitution. Its average length is 16 in., occasionally 18 in. and 20 in., and it is of very superior flavour.

—— The new *Gaillardia amblyodon* is a close ally of the old *Gaillardia picta*, a pretty border plant, of easy culture, free-blooming, and showy. *G. amblyodon*, however, has the advantage of being self-coloured, the florets being entirely of a rich, deep, sanguineous red. The leaves are oblong and sessile, with short rounded basal lobes; the involucral scales are very different from those of *G. picta*, being much more spreading. It will be a very useful plant for the sake of the variety it will afford, the colour being by no means a common one. We are indebted for specimens to Mr. Thompson, with whom it has flowered well.

—— One of the most effective among the hardy shrubs whose leaves assume a brilliant colour during the autumn season, and one which is much neglected by planters, is the *Vaccinium pennsylvanicum.* The coriaceous elliptic-lanceolate leaves of this plant turn to a brilliant crimson, quite equal in intensity to that assumed by the lovely *Ampelopsis tricuspidata (Veitchii).* A few bushes of this Vaccinium distributed about the beds of evergreen Rhododendrons, would light them up with a brilliancy which must be seen to be appreciated, for indeed there is nothing of the same habit which at all approaches it in colour. The plant is sometimes known as *V. tenellum.*

—— Captain Wintour, of Bristol, has invented a new *Ventilating Apparatus*, consisting of a metal frame, with glass, at each end of a cylinder of gauze wire. The cylinder slides backwards and forwards in a metal shield, by means of which it can be easily fixed in any window, door, or indeed anywhere. The inventor claims for it that it is specially adapted for the windows of private houses, churches, hospitals, and all large buildings; it can also be fixed in carriages, cabins of ships, tents, conservatories, and greenhouses. Its action is to admit air at the sides of the cylinder only, and remove foul air simultaneously and imperceptibly, without the least draught or admission of dust or insects. Such an apparatus seems likely to be useful in early vineries, or even where late Grapes are hanging in the autumn, being as they are sometimes subject to the attacks of wasps and birds.

—— Among the species of *Tulip* are some which, in bright spring weather, form exceedingly gay and attractive objects. One of these, a good old garden plant, is called *Tulipa oculus solis.* Mr. Harpur-Crewe remarks of this, that "when is has opened its great crimson eyelids, and stares up with its gorgeous black-and-yellow pupil at its namesake in all his meridian splendour, it is a sight which does the heart of a gardener good. I flowered last spring another closely-allied species, which will form a formidable rival to its more conspicuous, but not more beautiful congener—*Tulipa bœotica.* In colour it most closely resembles *T. oculus solis*; but whilst the latter is apt to grow tall, and is liable to be broken by wind and rain, *T. bœotica* is dwarf—scarcely taller than the little yellow *T. persica*; whilst its narrow and somewhat sharply-pointed petals present a marked contrast to the broader and blunter ones of *T. oculus solis.*"

—— We may hope soon to regard some of the groups of *Begonias* as tenants of our flower-borders, for not only has Mr. Wilson kept through the winter, virtually without protection, the handsome stemless *B. Veitchii*, but *B. Sedeni,* one of the hybrids bred from B. boliviensis, has during the summer grown vigorously and flowered freely on the same exposed root-work with B. Veitchii, the plants of both being in perfect health, and decorated with its finely coloured flowers.

—— In the *Eupatorium gracile odoratum* we have one of the most serviceable and important of winter-flowering greenhouse shrubs. Its clusters of white and sweetly fragrant blooms may be had in succession for months; and as it flowers freely, even in small pots, it is well adapted to the various purposes of embellishment. It may be grown with the greatest facility, and deserves a more general and extended cultivation.

—— At Mellerstain, Berwickshire, a seat of the Earl of Haddington, the gardener, Mr. Goodall, has raised a *Striped Antirrhinum* of some interest, inasmuch as plants raised from cuttings of the variegated shoots have withstood the frosts of the last two years, and are now assuming the form of shrubs, while all the others in a green state have been killed off.

—— How to *Pack Fruits* so that they may be conveyed in a green state through varying temperatures, has long been an unsolved problem. Mr. Carson, President of the Horticultural Society of Victoria, has, however, suceeded in sending to the International Exhibition at Vienna fresh apples, pears, &c., grown in Victoria. They were carefully gathered, and each fruit was wrapped up in clean unused tissue-paper.

A layer of dry cotton-wool was then laid in an ordinary case, and on this a layer of Apples in paper. More cotton was rammed in between the Apples and the sides of the case, as well as between the fruits; another layer of cotton succeeded, followed by fruit as before, and so on until the case was filled. The lid was then nailed on in the usual manner, and the packing was complete. The cases were placed in the ice-rooms of the steamers until landed. The result was that the fruit, when unpacked at Vienna, was in fine condition, and excited both admiration and astonishment.

## Obituary.

—— Thomas Dawson, Esq., of Meadow Bank, died on November 21. In him horticulture has lost one of its most generous and genial patrons. His love for it extended from the simplest border flower to the choicest exotic, and was both keen and constant; he was also particularly attached to members of the gardening fraternity. The Meadow Bank collection of Orchids was undoubtedly one of the best managed and most valuable private collections in Great Britain. Mr. Dawson was connected with the Carron Company, which brought him heavy duties, but his spare time was sacred to his garden.

# GARDEN WORK FOR JANUARY.

## FLOWERS.

THE severe frosts we have recently experienced have told with marked effect upon tender plants that were not protected. It is frequently necessary to examine the efficiency of the protection afforded, and to remember that the dryness of the materials employed is of more importance than the actual thickness, of the covering; much injury indeed often results from damping-off, if the plants are enveloped in sodden materials. A material point to be observed in protecting tender plants is the liability of the roots to suffer. In highly dressed grounds, it is important that the protection should be as little objectionable as possible; the use of bushy evergreen tops stuck neatly in the ground is to be recommended upon grass. It is requisite that the planting of deciduous trees and shrubs should be completed as soon as possible, in order that they may get root-hold, to support fresh growth; the lifting of large specimen shrubs, and ground-work alterations should also be pushed forward.

If the planting of *Roses* is not completed, no time is now to be lost. Old beds should have the greater portion of the soil removed—this will do good in the shrubbery—replacing it with a strong, healthy turf, well enriched with rotten dung. Plant *Ranunculuses* towards the end of the month for a successional bloom. At this season of the year a feature of the greatest importance, and one that is much neglected, is the thinning and rearranging of *Shrubberies.* This neglect must be looked upon as being in bad taste, and one can hardly understand how, in this age of refinement, it comes to pass that mixed shrubberies are frequently allowed to become wild entanglements, without order. This should be corrected, cutting out the large trees where they are so thick as to destroy the undergrowth, and rearranging the shrubs, cutting down such as are straggling, and keeping next to the grass a neat band of evergreens, which always present an orderly appearance. Presuming that the great majority of the flower-beds are planted with bulbs, spring-flowers, and evergreens, little can be done in the way of renewing the soil; opportunity should, however, be taken advantage of, to stack up a good supply of the various soils required for the renovation of the beds when the plants are removed. Let neatness and order pervade every portion of the ground, the grass and walks being frequently rolled.

*Bedding Plants indoors* should not have more fire-heat than is necessary to expel frost, and should be aired freely upon favourable occasions; and as damp must be guarded against, no more water should be used than will maintain the soil in a healthy, moistened state, applying it early in the morning on fine days, and ventilating freely to dry up any superfluity. *Alternantheras*, *Coleus*, &c., should be kept in a temperature ranging from 50° to 55°; towards the middle of the month, if a large stock is required, the temperature may be advanced, plunging them in bottom-heat, where they will soon produce an abundance of cuttings. I do not advocate starting the general stock too early, as in that case they seldom make such fine growth. The present stock and the requirements of the grower, must in a great measure be the guide in this matter. I advise that towards the end of the month the stock should be looked over, when such as there is a scarcity of should be placed in a growing temperature. *Variegated Pelargoniums* will require attention in watering and airing, so as to promote a genial temperature.

*Plants in Cold Frames* must have attention in covering. *Calceolarias* and similar subjects may remain covered during severe frosts, if they are afterwards carefully inured to the light. *Auriculas*, being still in a dormant state, will require little or no water—merely sufficient to prevent flagging, care being taken that no water hangs upon the leaves so as to generate damp, and giving air freely in mild, clear weather. *Carnations* which were late in being potted will be liable to damp, and must be freely ventilated when the air is dry.

*Greenhouse plants* must be kept in a quiescent state, using as little fire-heat as possible; more particularly is this necessary during severe frosts, when it is so difficult to regulate ventilation; give air freely upon all suitable occasions. Complete the tying of *Azaleas* and the training of plants in general. *Pelargoniums*, both of the show and scarlet groups, must have every attention as regards watering, affording them a gentle heat, with careful ventilation, and keeping down green-fly by timely and repeated fumigations. *Cinerarias* and *Calceolarias* should be shifted on, before they become pot-bound.

Towards the middle of the month the earliest batch of *Fuchsias* should be started; they should be pruned back freely, and if placed in an early vinery, will come forward progressively with the Vines; syringe freely, and as soon as the shoots have pushed an inch in length, shake them out and repot. This is also a good time to secure a good stock of cuttings for pot-culture; these make the finest possible flowering plants the first season, if vigorously grown on; a good stock of the finest varieties for planting out should also be secured, both the plain and the golden-leaved being valuable for garden embellishment.

*Stove plants* must be kept from growing as long as possible; nothing is gained by exciting them too soon, or by early potting. Towards the end of the month a few soft-wooded plants, as *Gloxinias*, *Caladiums*, *Begonias*, *Achimenes*, &c., may be started for early blooming, and various subjects will require cutting back preparatory to starting. Give attention to the training and pruning of all plants on rafters and trellises; wage a war of extermination against all insects, and forward by every means all operations conducive to a start next month.

*Conservatories* attached to the mansion are now gay with a mixed assemblage of stove and greenhouse plants. It is astonishing what a length of time flowers will stand at this season in a healthy atmosphere of about 50°, if care be taken about the supply of water at the root. In arranging Orchids and other tender plants, they should, as far as possible, be placed in the hottest part, giving Heaths and the hardier portion of the plants the most exposed positions. *Camellias* must not suffer for want of water at the root; they do not develop their flowers kindly in a temperature exceeding 45° to 50°. It is important to remove the plants, as they cease flowering, into a temperate house, so that they may be brought to rest, *Poinsettias* and *Euphorbias* being partially dried off. Keep the forcing-house well supplied with plants for succession, of which there is great variety. Success will in a great measure depend upon the thorough ripeness of the wood. Examine *Bulbs* that are plunged in ashes, removing such as have started; these, and Lily of the Valley, are best started in the mushroom-house in their early stages, so as to draw up the foliage and flower-stems, before exposing them. Roses require to be forced with caution, and aired carefully; wash them with soap, or dust with sulphur, to check mildew.—George Westland, *Witley Court.*

## FRUITS.

*Vines:* Keep up a steady night temperature of 60° in the early-house, with a moderately moist atmosphere till they are coming into bloom, when syringing must cease for a time, and the temperature must be raised 10° by night, and should range from 80° to 85° during sunshine. Give air every fine day, and always at other times keep up a circulation in the house through the ventilators. Commence thinning the berries at an early stage after the fruit is set. In the succession house the night temperature may be raised to 55°, increasing by degrees according to the stage of growth. Remove all lateral shoots and useless growth from pot Vines, and keep them well supplied with liquid manure as soon as the fruit is set, but use it at the same temperature as the house.

*Pines:* Keep a steady heat from 65° to 70°, with a moderate bottom-heat, to the succession plants in dung pits, and guard against any sudden changes in the weather by regulating the covering at night and attending to the linings. Give air to all Pines in fine weather, avoiding a draft through the pit. Any plants now starting into fruit should be watered, maintaining the temperature previously advised; and if much fire-heat be used, keep a moist atmosphere. Collect plenty of leaves (if to be had), to be in readiness for renewing the beds when required, for there is no better material than a good bed of leaves for the successful cultivation of the Pine.

*Peaches* and *Nectarines:* Maintain, by syringing, a moist atmosphere in the early house till such time as they come into flower, when it must be discontinued till the fruit is set. Give abundance of air when the blossoms begin to expand; at this stage the night temperature must not exceed 55°, or even a lower temperature is preferable to so much fire-heat. Fumigate on the first appearance of green-fly. Bring the succession-house forward as before directed.

*Cherries:* If any plants were placed under glass last month, they should be plunged and top-dressed with rotten dung and loam. Syringe on fine mornings, and, to begin with, keep a moist night temperature of about 45°, with plenty of air in fine weather.

*Plums:* If early fruit be desired, these may now be started, but it must be remembered that Plums will not admit of rapid forcing, especially in the early stages of the process; keep a moist atmosphere, and plenty of air in fine weather, as advised for Cherries.

*Strawberries:* Place the pots in an airy part of the house on shelves near the glass; do not give much water until the fruit-spike is visible, for keeping the plants dry at first in *early forcing* is the best means of securing a crop. Give plenty of air every day, and a little by ventilators at night is very beneficial. Introduce more plants under glass about twice through the month, and keep all, plants intended for later work protected from drenching rains.

*Melons:* Sow a little seed about the middle of the month for an early crop, and prepare dung and leaves to make beds to receive the plants when ready.

*Figs:* See previous directions.

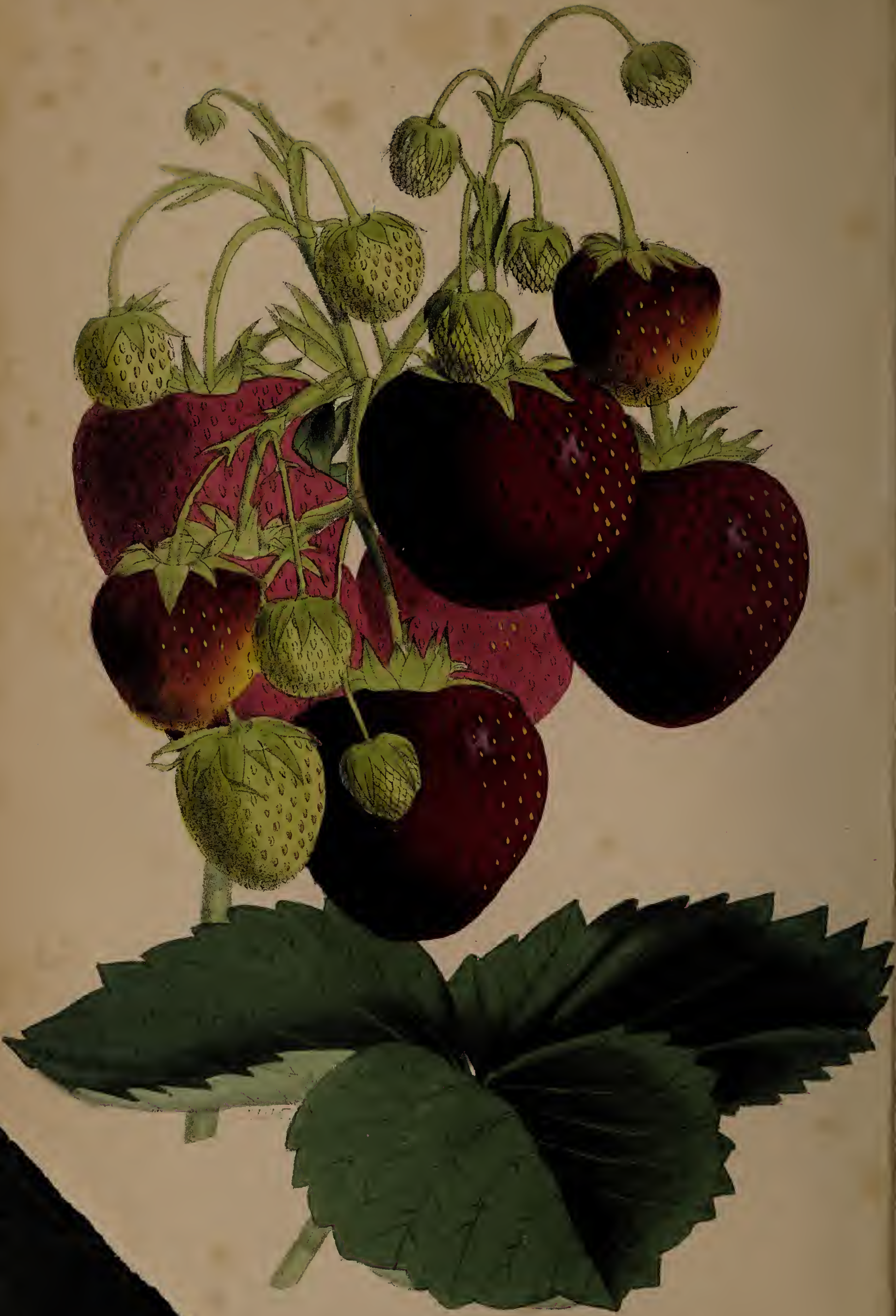
Out-Doors.—Proceed with the pruning and nailing of Wall-fruit trees at every favourable opportunity. All Standard fruit-trees may be pruned, and where they are infested with moss, &c., scrape or scrub the stems and large branches with a broom, afterwards dress them with a mixture of soft soap, urine, and soot. Root-pruning, if not done in October, may be still carried on. Operate on those trees that are unfruitful or growing too strong; this is done by cutting a trench two or three feet from the stem, according to the size of the tree, shortening the large roots, and placing some rotten manure in the trench. Go on with the pruning of Small fruits, manuring and forking the ground between the trees. Pay attention to the Fruit Room; remove all decayed fruit, and give air if at all damp.—J. Powell, *Frogmore.*

## VEGETABLES.

There is of necessity a great deal of sameness or repetition in the operations of the three principal winter months. During mild periods, the chief work possible consists of hoeing young crops during the dryer periods, removing all decaying matter, sweeping walks, &c., and keeping all in neat and workmanlike trim. The chief or heavier main work, such as digging, trenching, &c., has of necessity been greatly in abeyance, owing to the fact that little opportunity had occurred for wheeling out manures. Should severe weather occur, advantage should immediately be taken to wheel all the necessary fertilising materials on to the spaces needing it. Should no frosts visit us, it will soon be absolutely necessary to make a determined effort for the work's sake, even under adverse circumstances. The operation of wheeling during damp, soft, frostless weather may be greatly aided by means of a good set of planks, and no well-ordered garden should be without them. Where no such aid exists, the unsightly and disagreeable results of cutting up walks, and the "licking up" of the wheels, may be neutralised by first laying a row of long straw-litter along those portions of the walks which it is necessary to traverse; this is readily removed, when the wheeling is finished. When once the necessary manure has been distributed, the operations of trenching and digging should be carried on with all despatch, as somehow or other time always becomes at a premium with gardeners. The quarters intended for *Onions*, *Carrots*, *Parsnips,* and *Early Peas* should at all times be trenched if possible.

It is always a judicious procedure, should a mild and suitable period occur, to sow *Broad Beans* (Mazagan or Dwarf Fan) and *Peas* (Carter's First-crop) about the 20th of the month. Attend to the successional supply of *Asparagus*, *Seakale*, *Chicory*, *Rhubarb*, *Mint*, *Tarragon*, &c., by placing fresh batches of roots or crowns of either, into the necessary warm position for growing, or as in the case of *Seakale,* by occasionally shifting the pots of such stools as have been used, and placing them over fresh stools, covering up with the fermenting materials. Where convenience exists, make a sowing of *Radishes* (Wood's Early Frame); also of *Carrots* (Short or French Horn). Kidney *Potatos* may now be brought from the store-room in the necessary quantities, and be placed in shallow boxes upon moss or cocoa-nut fibre; water them occasionally, to induce the eyes to form young shoots, and subsequently plant them out for an early crop into the necessary frames or pits. Keep up the successional sowings of *Small Salading.*

In regard to the *Cucumber* house, whilst a maximum of about 68° to 75° be maintained during the day—the brighter the day the more the heat—be very careful not to permit excessive heat at night; for not only will this cause a weak and "dwindling" growth, but what is of more *immediate* importance, it will cause the plants to become abortive. A temperature of about 60° by night is far preferable during short days and dull weather than one of 5° or 10° higher. Air must be given on all proper occasions, and some slight external covering would lessen the outlay for fuel, to the great benefit of the plants.—William Earley, *Valentines.*



Bradley's Amateur Strawberry

F Waller Imp

# THE AMATEUR STRAWBERRY.

WITH AN ILLUSTRATION.

We have to thank Mr. Barron, of the Royal Horticultural Society's Garden, Chiswick, for the examples of this fine and useful Strawberry which are here figured. It is another of the triumphs of Mr. Bradley, whom we have had to thank already for Oscar, Dr. Hogg, and others of our finest fruits, amongst which this last is not by any means the least. During the past season abundant evidence has been educed to prove it one of the most useful of its class. It has been named *Amateur* by Mr. Bradley, in consideration of its enormous cropping qualities, its free growth, and general suitability for amateur cultivators. The appearance of the plant is somewhat like that called Sir C. Napier, a stronger grower, however, better constitutioned, and with the leaves larger and of a deeper green, but somewhat subject to mildew. It is a very heavy cropper; and the fruits, which keep well, are very large, obovate, and cockscombed in shape, of a fine deep red colour, frequently with a heavy coating of glaucous bloom, like the Hautbois. The seeds are small and prominent. The flesh is firm and solid, of a deep red colour, and of a fine, rich, sparkling, sub-acid flavour, exceedingly pleasant to the palate. It is in all respects a very excellent Strawberry, and well worthy of the First-class Certificate awarded to it by the Royal Horticultural Society. In reference to this Strawberry, we have received the following communication from Mr. Earley:—

"The new seedling Strawberry named the *Amateur* has proved here to be a most valuable addition to existing varieties. Black Prince, President (of two separate growers), Dr. Hogg, Keens' Seedling, and British Queen—which does well on this ground—all ripened in the order here noted, and they were followed at the nick of time by Amateur, which well filled up the gap existing between the last named of the older kinds, and the valuable Frogmore Late Pine. The fruit of the Amateur is firm, and good for travelling. It grows close around its crown, requiring a lesser amount than usual of net-protection, and possesses a flavour more brisk and refreshing than Strawberries generally have, and this without anything approaching to unpleasant acidity. Indeed, to those who think Strawberries somewhat insipid, the Amateur will prove a boon. Small runner-crowns dibbled out on to good soil somewhat late in the season, were able to produce a crop."

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# ROSE MADAME TRIFLE.

Why is *Rose Madame Trifle* never added by Rosarians to lists of select and good Roses? Why is it not written up, recommended, and sought after? My plant of *Madame Trifle* has the appearance of being a well-favoured seedling of that "perfection of a rose" *Gloire de Dijon.* It has similar wood and shoots, and particularly resembles it in foliage; but though it grows well, it is not such a strong grower as its assumed parent. It blooms very constantly,—well, perhaps more regularly than *Gloire de Dijon* itself. The blooms are of a far more delicate yellow-tinted white—that is, at a distance they appear whiter, and are consequently more showy, a delicate—beautifully delicate—creamy-yellow being just discernible upon closer inspection. The half-opened buds are very beautiful. The full-blown blossoms are globular in shape, seldom expanding fully to expose the centre.—WILLIAM EARLEY, *Valentines.*

## EDGINGS FOR KITCHEN-GARDEN WALKS.

AS the neatness of the Kitchen Garden so much depends on the employment of proper edgings for the walks, a few remarks upon the various forms now in use may not be out of place. They may be classed under two distinct heads—namely, the living and the dead. Where the kitchen garden is near the mansion or joined to the pleasure-ground, it should be made as ornamental as possible, and in this case I would prefer a living edging. A *Grass* verge, one foot wide, when well kept, is perhaps the neatest edging that can be used for the purpose ; but if the saving of labour is an object, then the *Small-leaved Wood Ivy* may be used. Of this a breadth of six inches wide will be sufficient, and when once properly planted and pegged down, it will only need trimming twice or thrice in the year. *Cotoneaster microphylla* will make a good edging of larger growth, and as it is of very compact growth, will not require much labour to keep it neat. The above will be found much cheaper than *Box*, and to have a more dressy appearance, besides which, Box edging, though exceedingly neat where it does well, is apt to become sickly, if both soil and situation are not suitable to it.

If a dead edging be preferred, this, of course, when properly laid, will not require further trouble. The cheapest with which I am acquainted may be made by placing bricks lengthways either on edge or diagonally, to about half their depth in the ground, and well fixing them with the soil, taking care to keep the upper edge perfectly straight and level. There are various cement edgings made for the purpose of marking out the boundaries of the walks and the beds ; and amongst these, one known as the cable pattern is the most effective I have seen. The best and most durable of all edgings, however, is made from chips of Portland stone and Portland cement, 5 inches square, rounded off on the side next the walk. This properly set on a firm, concrete bottom, will look the *beau idéal* of an edging, will give character to the garden, will last for a great number of years, and, I have no doubt, would in the end prove the cheapest.—GEORGE EYLES, *Kensington.*

## MYOSOTIS IMPERATRICE ELIZABETH.

THIS exquisite Forget-me-not makes a charming pot plant, its growth and habit well adapting it for this purpose. To my fancy it is one of the best for pot-culture. It is also one of the best for cutting from for bouquets. It is readily increased by dividing the young shoots that the plants throw out after they have done flowering. I pot the shoots singly in small pots, give them a good watering, and place them in a cold frame. Should the weather be hot and sunny, they should be shaded for a few hours in the middle of the day, but otherwise they will not require much shading. They should be kept rather moist, and in a short time they will be nice little plants. They should have two or three shifts into larger-sized pots during the winter and spring. Each time they are shifted they will require more space. They should have abundance of air in mild weather, but should be kept closed in frosty weather. Beyond this they will not require much attention, except being kept well watered during the spring, and in the early part of summer they will be objects of great beauty.—M. Saul, *Stourton.*

## VINES AND VINE-CULTURE.—Chapter IV.

### Pruning and Training.

THE Grape Vine is a very free-growing, long-lived plant. When young and vigorous, it grows very rapidly, the growths of a single season often attaining a length of from 30 ft. to 40 ft., or more. In its natural state the plant is of a climbing character, sustaining itself by its tendrils, so in its cultivated condition it has to be supported. It requires always, in fact, a certain amount of training, that is, the fastening-up of the shoots in some particular way, and the pruning of them to prevent excessive and confused extension.

There are various methods adopted in training the Vine, as being adapted for some particular place or purpose. We have, in the first place, that adopted in vineyards or vine-growing countries in the open air, where the young or fruit-bearing shoots are tied to upright poles, some 6 ft. or 8 ft. in length; this is scarcely within our province to enter upon at the present time. In the next place, we have that adopted and adapted for Vines against walls, either in the open air or under glass; and lastly, we have that against trellises under glass. In the training of Vines against walls, in the open air chiefly, it has generally been the habit to introduce a more fanciful form than when the Vines are grown against trellis-work. There can be no particular reason for this, because the mode adapted for the one case must be equally so for the other.

In a broad sense, we have only two modes in practice, in the training and pruning of the Vine, viz., 1, the Long-rod system; 2, the Spur system. Each of these modes is subject to all sorts of modifications, as fancy may dictate, or circumstances allow; but before proceeding fully with their explanation, it is necessary to say a word or two on pruning generally, apart from training. To prune is to cut off, or otherwise sever, a shoot or branch of a tree. Now, we prune our Vines for various reasons, as follows:—

Firstly, we prune for the purpose of attaining greater vigour in the plant. By cutting off a portion of a shoot or branch, the forces that would have been diffused over the whole are thereby concentrated on the part that is left, and hence we get a stronger growth.

Secondly, we prune for the purpose of training or securing some desired form.

We prune and cut our Vines according as we desire to train them. Be it understood that the shoots of the one season are produced from the matured buds on the shoots of the previous year, and that each bud on a Vine is capable of producing a shoot just according to the vigour of the plant, or to the mode or manner of the pruning.

Thirdly, we prune our Vines to the end that we may obtain fruit. This is an obvious reason, though the mere act of pruning can only to a very limited extent assist in the production of the fruit. By pruning we take away much of the fruit-producing parts, but we concentrate force or power on others. The fruit of the Vine is produced on the young shoots from the matured buds of the previous year. The more complete the maturity of the buds, the more likelihood of fruit being produced, so that in pruning for fruit if the Vine is badly ripened it is not advisable to prune too closely. Well-ripened Vines will, however, produce fruit from nearly every bud, so that the danger of losing a crop by too close pruning is not very great.

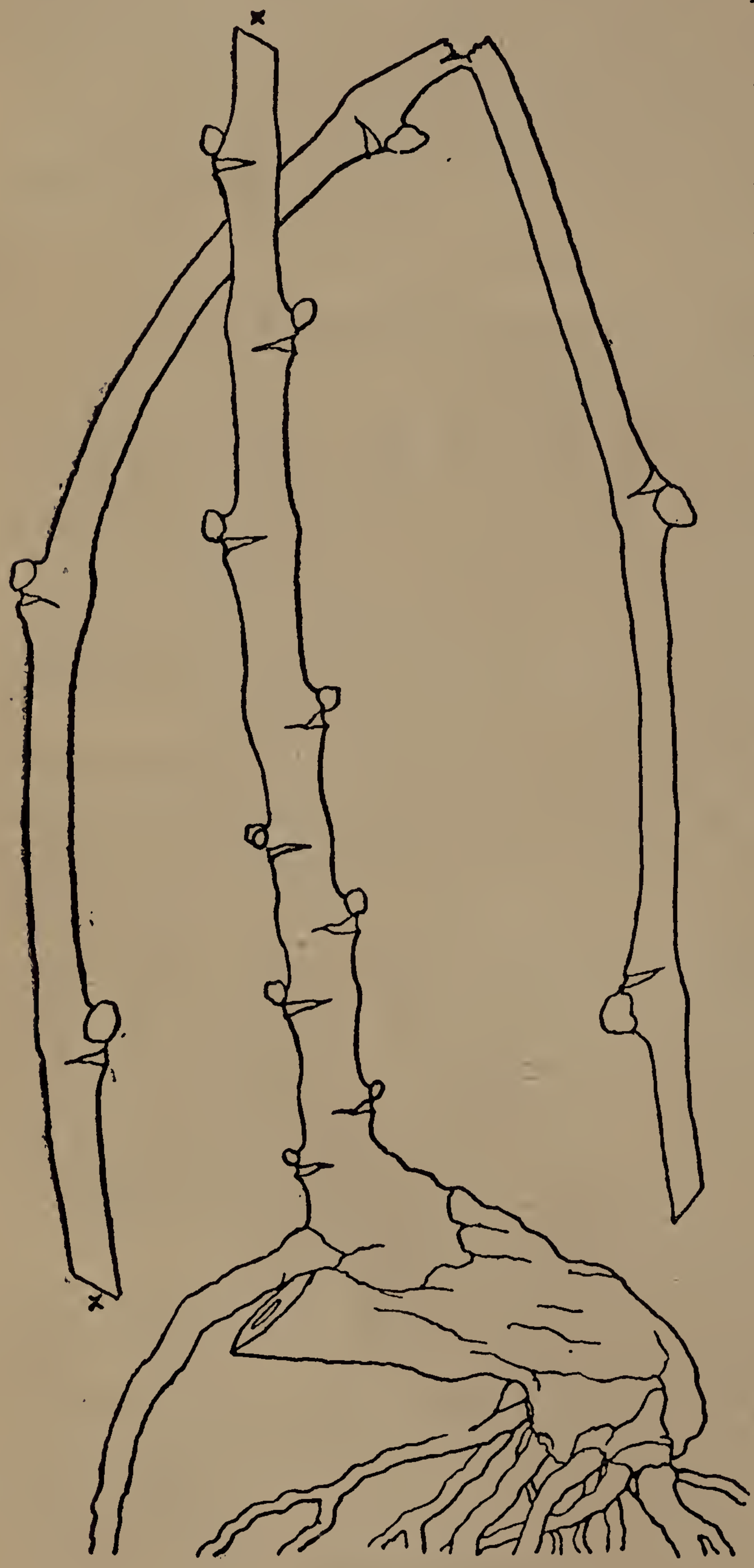


FIG. 1.—YOUNG VINE, CUT BACK.

In order that my remarks may be the more clearly understood, I shall make use of some illustrations of the various operations. I begin therefore with a young Vine (fig. 1) as about to be planted. It is a plant that has been grown from an eye the previous year, and is therefore about twelve months old—a long spindly thing of from 3 ft. to 4 ft. long. It may be planted during any of the winter months, but the earlier the better.

The first question asked by the uninitiated is this, "To what length shall I prune my Vines after planting?" My general answer is, "Cut them as low down as you can." When planted in such a position that the whole plant right down to the ground is fully exposed to the solar influences, cut it down, as shown by the figure, to within 3 in. or 4 in. of the ground. It is no matter what the strength of the plant may be ; the lower it is cut down, the stronger it will grow, and the better foundation it will make for the future plant. There are situations, however, where the young Vines cannot be cut down so low as this, namely, when planted against the low front wall of a house, either outside or inside, to be trained up the rafters. Here there is frequently 3 ft. or more of the stem comparatively in the shade, or in the cold. For this purpose stronger Vines are required, and the rule for pruning should be to cut them at from two to three

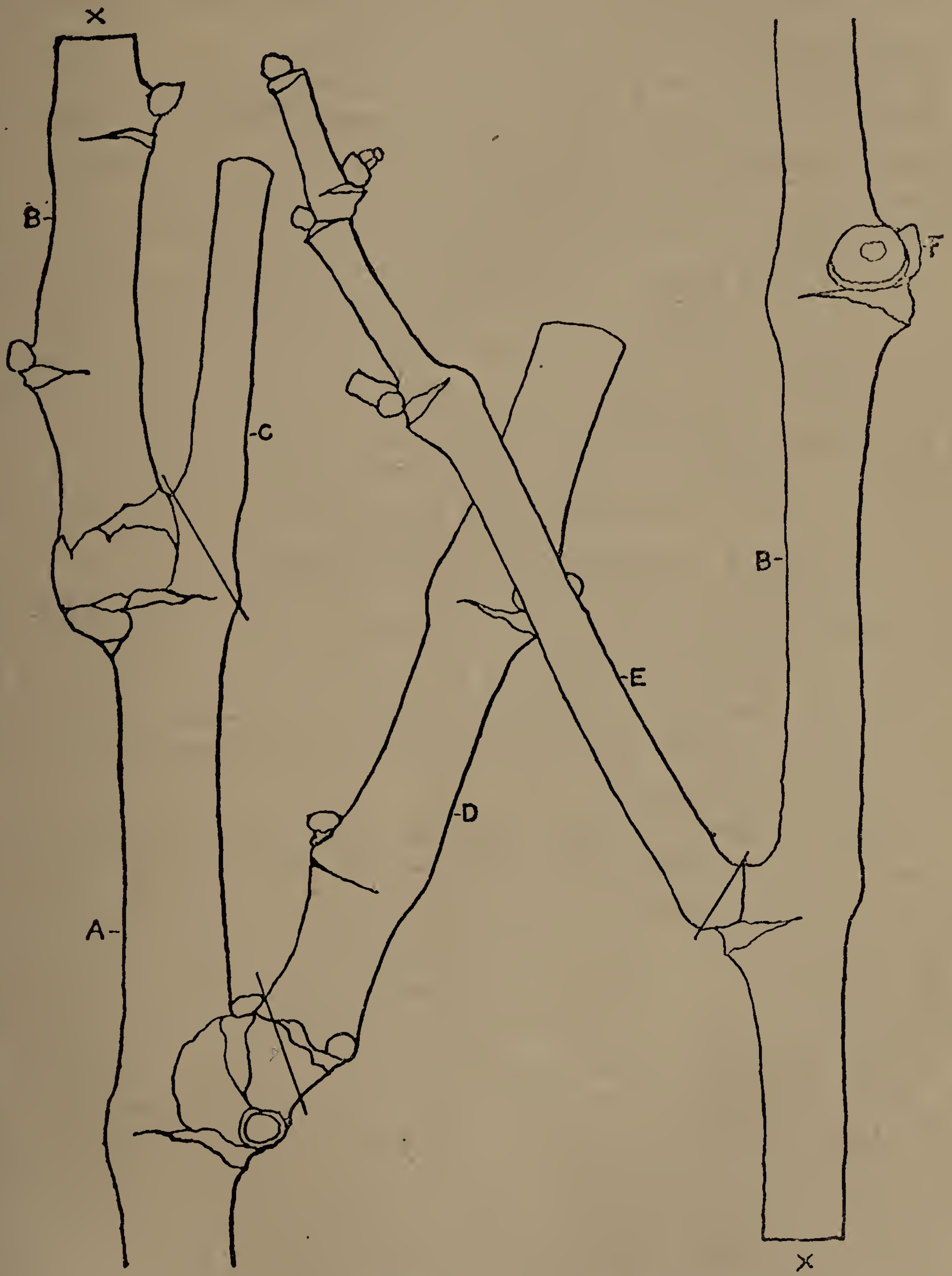


Fig. 2.—Young Vine-stem, showing the Mode of Pruning.

eyes above the level of the wall-plate, or above the line of light. A very good rule would be to prune to the lowest point whence the foliage produced could have the full influences of light and air. Before pruning at all, however, the subject of training has to receive some little consideration, *i.e.*, as to the number of stems it may be desired to have, and to prune to that number of buds accordingly, that is to say, if the training can be commenced so soon.

In the Spur system of pruning, to which my remarks shall in the first place be directed, it being the method now most generally adopted in this country, the practice has generally been to confine the plant to one single stem; some, however, prefer to plant at a wider distance apart, and take up two stems in the form of the letters U, I,—thus, $\underset{\mathsf{I}}{\mathsf{U}}$, or even three or more, as the case may be. As this is, however, a mere matter of training, and the treatment as regards pruning required for the one kind of stem is exactly the same as that required for the other, my remarks, although descriptive of the treatment of the one stem only, will be applicable to any number. In fig. 2, which represents a portion of the stem of a Vine at the end of its second year's growth, after being planted out, preparatory to pruning, A represents the upper portion of the stem of fig. 1, left at the first pruning; B B is the new wood, the growth of the second year; C is what is termed a "heel," left at the previous pruning, it being always advisable to cut a little in advance of the eye, rather than close to it; D is the first side-shoot, and was produced from the second bud left at the previous pruning. This, when pruned off as the cross-line indicates, shows the formation of the first spur; E is a summer lateral shoot, *i.e.*, a side-shoot formed from another shoot or stem of the same season's growth; F may be considered as the figurative point to which the stem B may be cut back.

To give a practical explanation of my meaning, however, I will suppose the Vine to be cut down, as in fig. 1, to—say 6 in. or 12 in. from the ground, and that the plant has grown well—that is, it has made a leading shoot of from 15 ft. to 20 ft. long, and of corresponding thickness. In the first place, if a side-shoot like D has been formed, this should be pruned off, as marked, to form the first spur, *i.e.*, if it is considered desirable or necessary to have a spur so low. In the case shown, the plant having been cut so low down, it would not, as a general rule, be necessary. Far better and stronger spurs are produced from the stems formed after being planted out; and this is an additional reason for cutting so low down; the stem is stronger, and the buds are larger, and so produce better shoots, which form better permanent spurs. In the second place, prune off all summer lateral shoots, such as E, quite close; and then, in the third place, we have to consider the length of the main stem B to be left, or where the point F shall be. This point has chiefly to be determined by the strength of the stem or the vigour of the plant. To the amateur Vine-cultivator it appears a great pity to cut away so much of the fine wood which has been formed; it seems a needless waste first to grow it, and then to cut it away, when you know that in every bud there is a bunch of fruit. The temptation is great to leave a good long rod on the young Vine; and so in many cases may we trace the commencement of their "road to ruin."

In the Spur system of training it is of paramount importance that all the permanent spurs formed should be of equal strength. So in the pruning or shortening of the main stem, the point to be kept in view is the ability or power of the plant to form good shoots from all the buds left. It should be pruned to this point, neither longer nor shorter, so that a good strong shoot may be produced from each bud that is retained. If we leave a long rod, say of ten or twelve buds, the four or five top buds will break or push strongly, and the lower portion very weakly, or not at all; and the result will be a Vine full of blanks, unsightly and unfruitful. Had this been pruned to one-half the length, all the buds would have broken or put forth shoots of equal strength, regularity, and fruitfulness. It is difficult to define exactly the length of rod to be left. A healthy plant with a stem, say the thickness of one's thumb or finger, may be allowed some 4 ft. or 5 ft. of new stem, or even more. It is better, however, to err on the side of severity in pruning the main stems of Vines than the reverse. The one is overcome in a few seasons; the other is a permanent loss and disfigurement to the plant.—A. F. BARRON, *Chiswick.*

## NEW GOOSEBERRIES.

THE following descriptions, by Mr. Leicester, of the new Gooseberries figured in our last number, reached us too late for publication with the plate; it will be seen that the original weights as seedlings exceed what has since been reached, no doubt owing to the immaturity of the plants:—

LORD DERBY (Bradley).—Skin hairy; colour light red, shaded and mottled with deep red; flavour very fine; berry long and well shouldered, with plump, nicely-rounded nose, the two-veined ones being a little flat-sided towards the stalk on the vein sides, and the three-veined ones longer and rounder. It makes short-jointed wood of medium strength, forms a fine spreading bush, and bears freely.

This is a seedling exhibited by Mr. Bradley Bradley, of Wilmslow, at the National Gooseberry Show, held at the Sir John Falstaff Inn, Market Place, Manchester, on August 6, 1870. On this occasion, the following prizes were awarded to this variety, viz.:—First prize in Seedling show, for the best Red Seedling, weighing 28 dwt. 1 gr.; first steward prize, shown against named varieties, weighing 28 dwt. 1 gr.; third prize in class, showing against named varieties, weighing 26 dwt. 10 gr.; and first prize, for a plate of twelve fine-flavoured red Gooseberries, it being tested against the best fine-flavoured kinds in cultivation, all the twelve berries being beautifully coloured and very fine, averaging more than 24 dwt. each. It was let out on the second Saturday in October, 1870, at the George Inn, Wilmslow, in twenty-one lots at 10s. 6d. each. The plants being young and very small, this variety is not at present in general cultivation, the whole of the lots being purchased by gooseberry-growers, who, I may say, endeavour to grow them into fine plants for exhibition purposes, rather than to increase the stock, which will prevent its being cultivated so extensively as it ought to be, for some years to come.

VICTORY (Addis).—Skin smooth; colour greenish-white; berry long, plump, and well-formed, with smooth, even surface. It makes strong wood, bears freely, and forms a spreading bush. This is a seedling, exhibited by Mr. George Addis, of Gospel End, near Dudley, at the National Gooseberry Show, Manchester, on August 6, 1870, and to which was awarded the first prize for the best White Seedling, weighing 28 dwt. 21 gr. It was let out on October 15, 1870, in twenty-one lots, at 8s. 6d. per lot. This variety is a very promising white berry, not at present in general cultivation.—CHARLES LEICESTER, *Crompton Road, Macclesfield.*

## NEW BEDDING CALCEOLARIAS.

ONE would think it would be scarcely possible to obtain a yellow-flowered Calceolaria adapted for bedding purposes that could be regarded as a beat on the old *C. aurea floribunda*, and yet this is found in *Golden Gem*, a variety that has gained a great reputation in the North, because so hardy, free, floriferous, and so little affected by the weather. It has a pure shrubby habit, is very compact in growth, and the flowers are of a clear golden hue. In *Princess Louise* we get the colour of the old *C. amplexicaulis*, clear sulphur-yellow, combined with a dwarf, branching, free-blooming habit. Add to these *aurea floribunda*, and we have before us the three best yellow bedding Calceolarias.

Of amber-coloured flowers, *Beauty of Herts* stands pre-eminent; it has a dense, robust, shrubby growth, blooms with great freedom, and the flowers are borne on stiff foot-stalks. Another fine variety is *Amabilis*, the colour pleasing buff, shaded with brown crimson; this stands wonderfully well in the very bitterest weather, and flowers with great freedom and continuity. *Princess Alexandra*, orange-buff, is a new variety that does not appear to equal either of the foregoing, but this is a statement that will admit of difference of opinion.

Of crimson-flowered varieties there are several candidates for favour. *Crimson Dwarf* has flowers of a bright-shaded crimson hue, has a dense compact habit, is very free, and stands well. *Pluto* has dark crimson flowers produced in very large dense trusses, is an excellent grower, making a most effective bed, and continuing gay all through the summer. These two stand out from all the rest, because of their capacity to stand exposure, many of the high-coloured varieties being very defective in constitutional vigour, partaking, as they do, so largely of the blood of the Herbaceous varieties.—R. DEAN, *Ealing.*

## LEICESTER RED CELERY.

LEICESTER RED CELERY is synonymous with Major Clarke's Solid Red. It is very tantalising to have an article of this kind floating about the country under two names,—a source of confusion to the inexperienced, but no case can be more decided than the present.

My opinion of this vegetable has already been published in this journal, and I then thought no further remarks would be necessary; neither would there have been, had not the Leicester Red been rechristened and sent out as a new variety. In this matter there cannot possibly be any mistake. During 1872 I was favoured by Messrs. Harrison and Son, of Leicester, with a sample of seed for trial; this I grew in company with many more kinds, and found the quality of first-rate excellence, the best by a long distance I had ever grown. During 1873 a new competitor, under the name of Major Clarke's Solid Red made its appearance, and this I have grown side by side with the Leicester Red, and cannot detect the least difference between them, the habit and quality being exactly the same. In this matter, I require no support; still, competent judges have again and again expressed the same opinion. No doubt Celery, like other vegetables, may be improved or injured by certain systems of cultivation, yet we cannot altogether, under the most careless methods, subdue sterling merit. What has been the experience of your readers generally in respect to these two varieties?—Alexander Cramb, *Tortworth.*

⁂ This variety was, it appears, grown at Chiswick so long ago as 1866-7, and was reported on in the *Gardeners' Chronicle*, 1871, p. 40, as being of the finest quality, the statement that it was a hybrid of Major Clarke's being, however, incorrect, since the variety was not raised by, but given to him, and by him brought into notice. Mr. Barron informs us that he once received the same variety of Celery from Mr. Welch, who, at the time, was gardener to the Archbishop of Armagh, at Armagh Palace. Whatever its name or origin, there is no doubt it is one of the best Celeries grown.—Ed.

## HARDY PRIMROSES.

THERE are few more interesting hardy subjects than Primroses—seedling Primroses in the batch more particularly, the form, colour, and variety they exhibit being quite remarkable. It is, however, astonishing how little the gardening public, till very recently, understood the simple distinctions between the ordinary type of Primroses, and such permanent sports as the Polyanthus. So little, indeed, was known, that not long since it was stated publicly that a Primrose sporting from the Acaulis or single-scape form, at once became a true Polyanthus in the proper acceptation of the term. I believe I was the means of demolishing this unwarrantable conclusion. Owing to a challenge I received from a well-informed gardener who visited me, I last spring undertook to exhibit half-a-dozen Primroses distinct (keeping well within the wording of the schedule of the Royal Horticultural Society), and I maintained that I would carry off a prize with them as Primroses proper, although they each had polyanth or umbellate flower-spikes. My friend laughingly told me that the judges would never give to Polyanthuses a prize offered for Primroses. However, I gained the prize; and that the judges had given a proper decision was confirmed by our leading newspaper, the *Gardeners' Chronicle.* Since then many chapters have been written in most of the garden publications, and amongst them two excellent illustrated articles in the *Journal of Horticulture.*

My wish in penning these few lines for the pages of the FLORIST, is to show that the distinctions between the Acaulis and Polyanth types is of the most limited character, excepting in so far as the true florists' Polyanthus is concerned. Thus, if a Primrose is planted in thoroughly rich soil, and maintained therein for a few years, it will not only change the colour of its blooms, but will push up occasionally the strong clustered flower-stems of the Polyanthus. The seedlings from these same normal cultivated Primroses will, in like manner, yield permanent Polyanth or umbellate varieties, the produce of the very first sowing. I maintain that these facts fully confirm the common-sense view of the case. A Primrose is not a true Polyanthus of the florist's standard, until it has assumed a permanent, fixed, non-sportive character. In four years from the original sowing of seeds of highly-cultivated normal Primroses, it is astonishing what colour and variety will be found amongst the seedlings. I have had not only orange-yellows, Indian-yellows, puce and maroon, striped, marmorated or blotched varieties, but during the last season I was at Digswell I bloomed one of a lovely blue colour! It was a weak plant, however, and with all my care of it, under a forced removal I unfortunately lost it.

I have said enough to show how interesting these simple cultivated specialities are, and what an amount of gratification they are capable of affording the amateur florist. I would make one more remark about the exhibition of Primroses, which are included in the Schedule of the Royal Horticultural Society. There are offered therein, for the spring of 1874, six prizes, for different exhibits, of the total value of 51s. I scarcely know how to designate such paltry prizes as 10s. and 7s. for 6 pots of well-grown distinct varieties. Personally I may say that were I to exhibit, though I live a very short distance from London, the cab-fare would "swallow up" my prize-money, even if I got the first prize. I am not an habitual grumbler, but when I contrast this offer, by this Society, with many of the other prizes offered in the same schedule, I am fain to say,—How can these things be?—WILLIAM EARLEY, *Valentines.*

## FRUIT-TREES FOR HEDGE-ROWS

### BETWEEN FIELDS ON FARMS, AND AS GROUPS IN PARKS AND PLEASURE-GROUNDS.

IN driving through the country in any direction, one cannot but be struck with the monotony and comparative worthlessness of Hedge-row Timber, which is usually pollarded, or cut into mop-headed scarecrows. The same sorts are repeated, mile after mile. It seems as if the planters had, in many cases, studied how to provide a maximum of injury to the cultivated fields, with a minimum of gain from the trees grown. And even where the timber is somewhat better, the sameness of the trees produces a sense of weariness, and one longs for a change, as a school-boy for his holidays. That change would be easily effected by the substitution of fruit-bearing for the usual timber trees used in hedge-rows. Rows of stately Apples, Pears, Plums, Cherries, Medlars, Mulberries, Quinces, Damsons would bring relief to the eye, as well as profit to the pocket, and plenty of good fruit into the homes of thousands who hardly ever taste it now. Why should not such a change be at once begun? This is the time to plant; and if any farmer would begin on only one hedge-row this winter, I am sure it would be followed by scores or hundreds next. Hardly anything could add more to the richness of our landscapes than the beauty of fruit-trees, in bloom and in fruit, in our hedge-rows. Even the form of the trees would be an immense improvement on the unsightly objects which now deform, rather than adorn, these boundary lines.

And then as to groups in parks, and home-grounds, and plantations, what an additional charm these would prove to the country! Parks are mostly overdone with green—green below, green above, green wherever you look or go. The blossoms or fruits of fruit-bearing trees would add the needed colour, and lighten up the entire scene, as when a dark summer cloud is rolled off from the face of an April sun. Nay, if a little extra colour were needed, we have abundance now in our noble host of variegated trees, ranging through all shades of silver and gold, red and purple, even into semi-blackness. Hitherto planters of hedge-rows, and even of parks, seem often to have been guided by mere routine, or the red-tape of every-day customs. They planted as others did, or for shelter merely, or at best for certain results of mere mass and shade. The time is surely come for the due use of colour, running it as a golden or purple or silver thread through all our lines and massings, to make of the different fields one harmonious whole of outspreading beauty, and to crown the produce of the far-reaching parks with coronets of uprising splendour.

And then, how this change would add to our fruit basket! We spend nearly £4,000,000 per annum for fruit. Probably this might be reduced one-half, were Fruit-trees to adorn our hedge-rows, and form clumps, at once of beauty and plenty, in our parks and pleasure-grounds.—D. T. Fish, *Hardwicke.*

# THE JUDAS TREE.

ALTHOUGH the leguminous or pod-bearing family of plants, to which the common Judas tree (*Cercis Siliquastrum*) belongs, is one of the most extensive and useful in a commercial way, it is not by any means in the back-ground from an ornamental point of view, for it is this family of plants which produces some of the most gaudy colours by which the scenery of this country is enlivened and enriched. The subject of this paper is a plant that may well lay claim to a place in the latter category. It is a hardy deciduous tree, producing a wonderful quantity of red flowers in the months of May and June, and that before much of the leaf expands to hide them. So distinct is it in colour, and so profuse its bloom as compared with any other tree flowering at that time of the year, that even a shrub of not more than a few feet in height is very conspicuous and ornamental. I have seen the plant growing against a wall, and also as an ornamental shrub on the lawn. In the latter position, it is every season most lovely; but with only one exception I have no recollection of ever meeting with the tree planted where it could develop itself into suitable proportions, so as to lend its beauties, among other things, to park scenery. It is said to grow to the height of from twenty to thirty feet, which no doubt is correct, as it possesses vigour enough for that; and it has also a tree-like habit, being quite equal in this respect to the *Catalpa.* Though its foliage is small and kidney-shaped, yet it is quite distinct enough to be ornamental. It is one of a most beautiful genus of ornamental trees, and I have singled it out in order to arrest in some measure the growing tendency to forget or neglect the merits that many of our old trees and shrubs possess. Only imagine what an attraction this tree would be, if planted in a prominent position in the foreground of a landscape, or even as a single specimen by the side of a carriage-road, and the picture thus realised in the mind's eye ought to be enough to induce a trial of it.—THOMAS RECORD, *Vinter's Park, Maidstone.*

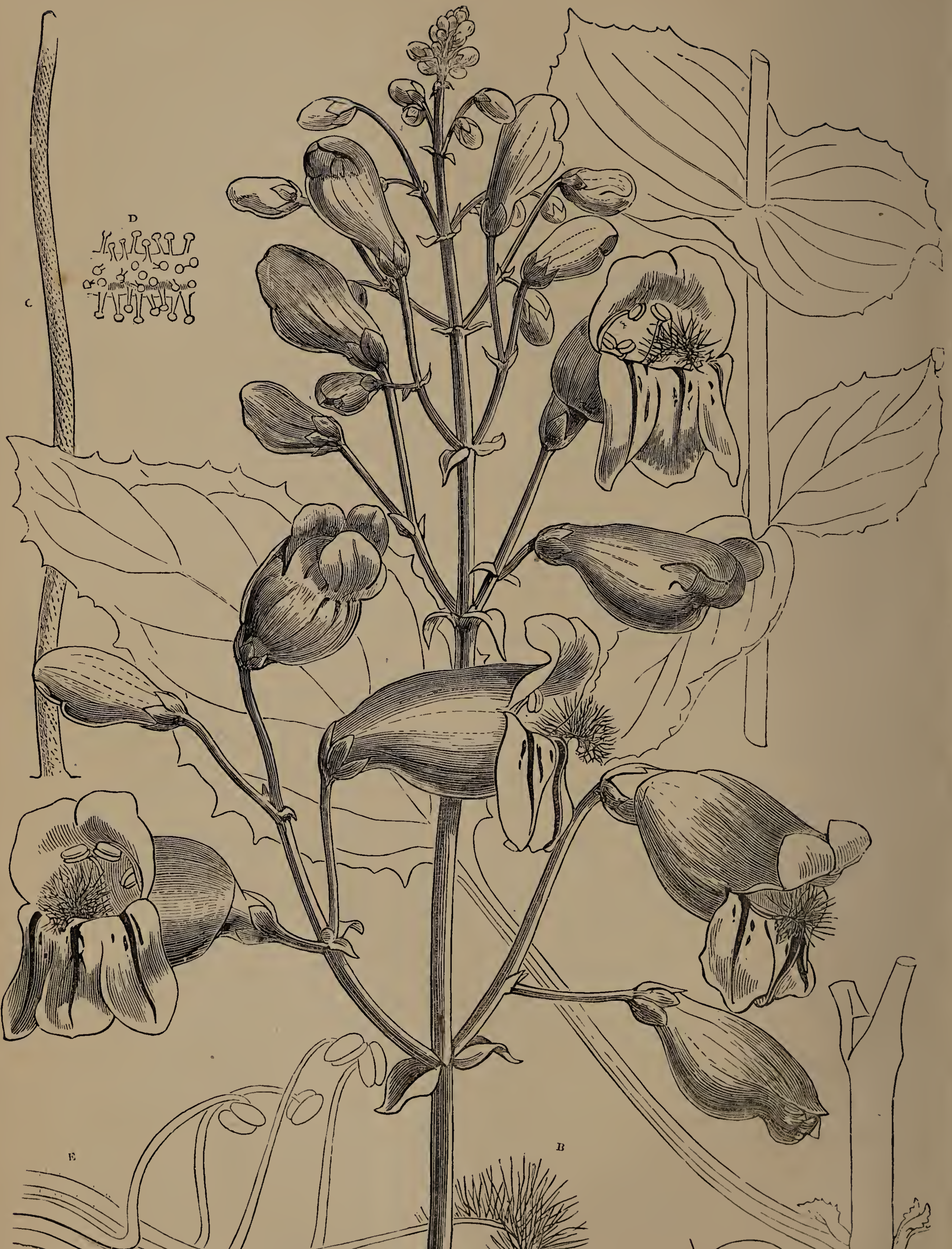
## THE MUSCAT ESCHOLATA SUPERBA GRAPE.

I GREW this grand Grape many years ago, but as with the *Black Damascus,* I have discarded it for its bad-setting propensities. I never could see much difference between the *Canon-Hall Muscat* and the *Escholata,* both having very large oval berries, and without great attention to their setting, it was difficult to get their bunches perfect, in consequence of the many small seedless berries in them. I have grown the berries of both varieties quite as large as *Golden Champion,* and as with Mr. Plester (p. 15), they did not spot like that variety. I cling to the notion that Mr. Thomson must have made use of the *Canon-Hall Muscat* or the *Escholata Superba* for the parentage of his grand seedling grapes, the *Golden Champion* and the *Duke of Buccleuch.*

The Escholata, if grown, should be cultivated, as Mr. Plester says, only to a limited extent, for the old *Muscat (of Alexandria)* cannot be beaten as a white Grape, either for show or for flavour. It, however, wants plenty of time and of heat, and therefore to grow it to perfection, its forcing ought to commence not later than the beginning of January.

I have grown for the last three years the true *Tokay,* and found it a first-rate White Grape, and a good keeper when ripe. The bunch and berries very much resemble those of the Muscat, but it is without the perfumed flavour. With me it has ripened in a late house, and got a fine amber-colour, far deeper than the *Royal Vineyard* and *Trebbiano* in the same house. The *Royal Vineyard* is a late White Grape, that is not grown so much as it deserves for late keeping. With me it keeps better than *White Lady Downe's,* and although not of first-rate flavour, it matches *Lady Downe's Seedling,* keeping in good condition, like it, until the end of May.

I raised some seedling Grapes in 1870 from a cross between Lady Downe's Seedling and West's St. Peter's, and last year had one of the most promising inarched in a late vinery on a West's St. Peter's; it has produced three bunches, and up to this time they are keeping well. The bunches and berries are about the size of those of Lady Downe's Seedling, with the vinous flavour and juiciness



Pentstemon Palmerii.

of West's St. Peter's, and if it keeps very late, I hope it may turn out an acquisition.—William Tillery, *Welbeck.*

## PENTSTEMON PALMERII.

WITH AN ILLUSTRATION.

OUR illustration of this choice novelty amongst herbaceous plants, borrowed from the *Gardeners' Chronicle*, was prepared from specimens kindly furnished by Mr. W. Thompson, of Ipswich, by whom the plant has been imported. He writes of it as follows :—"*Pentstemon Palmerii* of Asa Gray is a well-marked species, allied to P. Cobæa and P. Jamesii. It grows four feet high or more, developing secondary shoots from the base of the main stem. One does not often see so distinct a species—some of its more striking features being the dilated corolla, the elongated lobes of the lower lip, and the bearded sterile filament. The foliage, moreover, is bold in character and very glaucous, the stem-leaves, especially those of the main stem, being strikingly connate."

The tall, stout stems of this fine Pentstemon are terminated by a noble paniculate glandular-pubescent inflorescence. The young shoots from the base have opposite, long-stalked, fleshy, glaucous leaves, oblong-ovate in form, with coarse, distinct, and remarkably prominent marginal teeth, while the leaves on the flowering-stems are short, broadly ovate, and completely connate. The flowers are rather more than an inch long, the tube remarkably inflated above, and contracted just at the base, where it is set into the short inconspicuous calyx. The colour is a pale rosy-lilac, with a purple stripe running down each of the lobes of the remarkably elongated and deflexed lower lip, while the upper lip is projected forwards, and merely revolute at the edge. The bearded sterile filament is very conspicuous at the mouth of the tube.

This novelty is very ornamental in character, as well as perfectly distinct, and will be welcomed in every garden where hardy perennials are cared for. It comes from the Sierra Nevada, in California, at an elevation of 5,000-6,000 ft. The figure shows at A the stamens and pistil enlarged ; B, the bearded sterile stamen ; C, one of the hairs of the latter much enlarged ; D, glandular hairs at the base of the stamens (E), much enlarged.—T. Moore.

## THE NEW VEGETABLES OF 1873.

FEW vegetables are, as a rule, extremely rare, although new names are at all times abundant. Our accessions generally are simply selections, which may be, at the same time, decided improvements, of our existing stocks. Where such is the case, the credit due is almost as great as that achieved by the introduction of an entirely new variety by the more laborious process of hybridisation. The Royal Horticultural Society, by its comparative trials of all the so-called new and improved varieties of vegetables against the approved standard sorts, renders good service to practical horticulture.

In the Potato the novelties and accessions have been both numerous and meritorious. Of late years quite a new and distinct class of Potatos has reached us from America, and to some extent superseded our old-established favourites. These American Potatos have certain peculiarities of character that constitute an almost distinct class. They are early in coming into use, and continue fit for use for a great length of time; the tubers are mostly large in size and very handsome; the varieties may all be termed enormous croppers; the whiteness of the flesh is remarkable; and in most cases they are very floury when cooked, and of excellent quality. On this point, however, there is some divergence of opinion—some soils and some seasons appearing to be more favourable for their development than others. The character of the haulm is also quite distinct, the foliage being large, broad, pale green, and ripening off early. We wish we could say that they are not subject to disease. Of the more remarkable of these Potatos, we would specially mention the American *Late Rose*, a great improvement on, and not to be confounded with, the American Early Rose of earlier introduction; this is an enormous cropper, frequently producing tubers from 8 in. to 10 in. and 12 in. in length, and unlike most other large Potatos, the whole is of usable quality; the skin is pale red or rose, the flesh pure white, very dry and floury, and, in our estimation, of excellent quality. Another Potato of the same character, but much earlier and of dwarfer habit, is the *Extra Early Vermont;* the quality is excellent. *Vermont Beauty*, or as it is now called, *Brownell's Beauty,* is certainly one of the most beautifully-coloured red Potatos we have seen; it is of large size, and fine quality; a second early, of fine dwarf habit; and a heavy cropper, producing all the tubers of fine large uniform size, quite close to the haulm. Of the white-skinned American varieties the more noticeable are *Bresee's Climax* and *Bresee's Prolific*, the latter a very beautiful variety, and both great croppers and of fine quality. We would also direct attention to the *Red-skinned Flourball*—a new name for an old variety—one of the most remarkable and generally useful Potatos we have.

We have, moreover, several English champions in the field who are reaping laurels fast. Mr. Fenn is again to the front with a host of new seedlings, all of purely English character, and possessing much of the blood of the fine old Ashleaf Kidney. In *Alice Fenn, Early Gem*, and *Early White Kidney* we have three very early, handsome, and heavy-cropping kidney Potatos, and one remarkable trait they possess over all other early Potatos, is that they are equally as good for late as early use. In *Fenn's Early Market* we have a most important addition to our early round Potatos; it is very early, of good size, a great cropper, and of excellent quality. The late firm of Bell and Thorpe has also supplied us with a great variety of novelties of the character of the Fluke, the most remarkable of which is *Model*, a large, broad, flat, white tuber; and Mr. R. Dean comes forward with *Excelsior*, a very large, long, white kidney of the Dawes' Matchless type, and of extra fine quality; and also *Bountiful*, the most handsome red kidney Potato we have. So much for Potatos, then, and for English *versus* American sorts. In the former we have no doubt a finer quality, and tubers more suited for a gentleman's table; but in the latter we have undoubtedly far heavier cropping properties, combined with fair average quality at least, which will render them very popular wherever crop is an object.

Amongst PEAS, we have again to thank Mr. Laxton, who has done so much towards their improvement. Mr. Laxton has already set his seal upon nearly every class of Peas, and given us at once the earliest and the latest, the largest-podded and the most handsome. This season Mr. Laxton has broken into fresh fields, and in *Laxton's Gem* we get a large-podded, prolific, and decided improvement on Maclean's Little Gem. In *The Shah* and *Dagmar* we get two dwarf and very early—quite as early as Dillestone's Early—white wrinkled marrows. In *Marvel* we have a large-podded, most prolific, and handsome mid-season dwarf wrinkled marrow, of very fine quality, which we think is one of the most meritorious of Mr. Laxton's introductions. In *The Baron* we have a very handsome large-podded green marrow, resembling Superlative, but earlier than that variety. If we go on at this rate, our old varieties of Peas will soon disappear altogether.

In KIDNEY BEANS we have also many important additions, which we gladly welcome, such as *Carter's White Advancer*, a great improvement on the White Canterbury; *Osborn's New Early Forcing*, a very fine early and good forcing variety; and *Cutbush's Giant Dwarf*, a very fine variety for a general crop. In the Dwarf Butter Beans we are to be introduced to a somewhat new class, the pods being of a pale yellow colour, which they retain from their earliest stages throughout. The *Mont d'Or Butter Bean* is also one of the same class, but a runner; it is a great and wonderful cropper, and of very excellent quality. These yellow-podded Beans, although rather novel to us, and not much appreciated on account of the prejudice against them as to colour, are very common in Hungary and other parts, and are known under the name of Fleisch, or Fleish Beans.

In BROCCOLI we have a very fine and important addition in that called the *Leamington*, the heads of which are very large, very solid, very white, and well protected; whilst among CAULIFLOWERS, the finest is named *Dean's Snowball,* a very dwarf, very early, and close-headed sort.

In CELERIES, the *Leicester Red* comes forth as one of the best of the season; it is dwarf, and the heads are always very solid, and it is of excellent quality.

In CUCUMBERS, we are indebted to Messrs. Munro and Wilkinson for their *Duke of Edinburgh.* This is one of the finest of Cucumbers—a free bearer, of medium length, and a fine deep green colour, bearing a few black spines, and having scarcely any neck.

In TOMATOS, although several new aspirants were brought forward, there were none equal to *Hathaway's Excelsior*, which is undoubtedly a great acquisition; it is early and prolific, with the fruits large, smooth, round, and of a fine colour.

From the above, therefore, it will be seen that the past year has been more than usually profuse in its additions to our stock of vegetables. This is extremely gratifying and satisfactory.—*Abridged from the Gardeners' Chronicle.*

# ORCHARD-HOUSE PRODUCE.

I HAVE read with interest the remarks by " G. D." on the profitable and successful management of Orchard-Houses, but fail to understand that the results which he quotes are of a very profitable character. The labour of watering plants in pots, syringing, fumigating, thinning, soil, expense of pots, &c., does not seem to have been placed on the side of the expenses, to say nothing of the first cost of trees, erecting the structure, and other items, which add materially to the outlay. The coat of paint once in three years is not high-keeping for a glass structure. We valued our returns as a market man would, and I still believe that, with the best management, the whole thing is profitless in a money point of view. I made no complaint of deficient crops, as we had very heavy crops, and much of the fruit was excellent both as to quality and appearance. When one knows the returns from well-managed Kentish and other orchards, and the nominal expense by which these orchards are kept in full bearing, one is impressed with the idea that orchard-house pot-culture is very like baby-gardening, or at least something to be adopted chiefly for amusement.

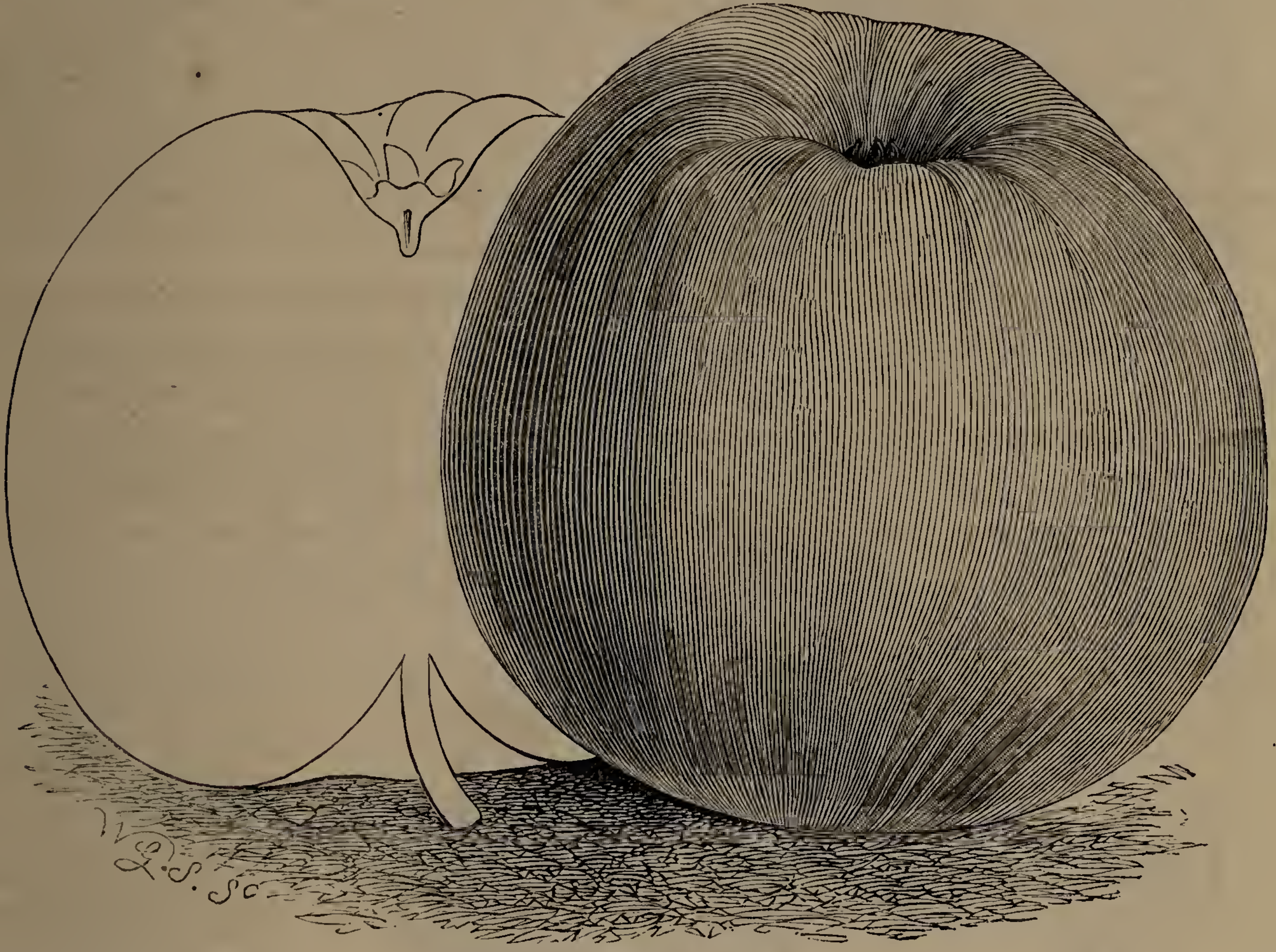
Since writing my paper on this subject, I have planted out one-half of my trees, used the pots for other purposes, and sent the " trucks " where they will be turned to useful account. I feel sure that from the trees planted out I shall get good fruit with about one-sixth part of the use of the watering-pot as formerly. I feel grateful to " G. D." for giving us the benefit of his experience and practice through the pages of the Florist and Pomologist; and I freely admit that his system, so far as economy is concerned, appears to be in advance of that of practitioners in general.—M. T.

# BARCHARD'S SEEDLING APPLE.

THIS is neither a new nor a very old variety. It was raised by Miss Barchard, of Putney, some 40 or 50 years ago, and has been frequently brought under notice in one way or another, but has never yet taken that prominent position its merits so fully entitle it to. Mr. Thompson mentions it in the *Catalogue of Fruits of the Royal Horticultural Society.* It was awarded a Certificate by the Pomological Society some years ago, and now, at last, it has received the same honour from the Fruit Committee of the Royal Horticultural Society.

We have specially to thank Mr. F. Dancer, of Little Sutton, Chiswick, for showing us the full merits of this thoroughly excellent Apple. Near Gunnersbury Station may be seen a group of some 40 or 50 good-sized trees of this variety, which every autumn present a most beautiful picture, laden as they are with bright, shining, rosy-cheeked fruit. The trees themselves are of a fine free style of growth, and form objects of quite an ornamental character.

The fruit is of medium size, of the Nonesuch shape, flattened at each end. The eye is open, set in a deep plaited basin; the stalk is about an inch long, and rather deeply set. The skin is of a clear greenish-yellow on the shaded side, very much suffused and streaked with red and bright scarlet on the exposed parts, this high-colouring giving it, especially when hanging on the tree, a very



Barchard's Seedling Apple.

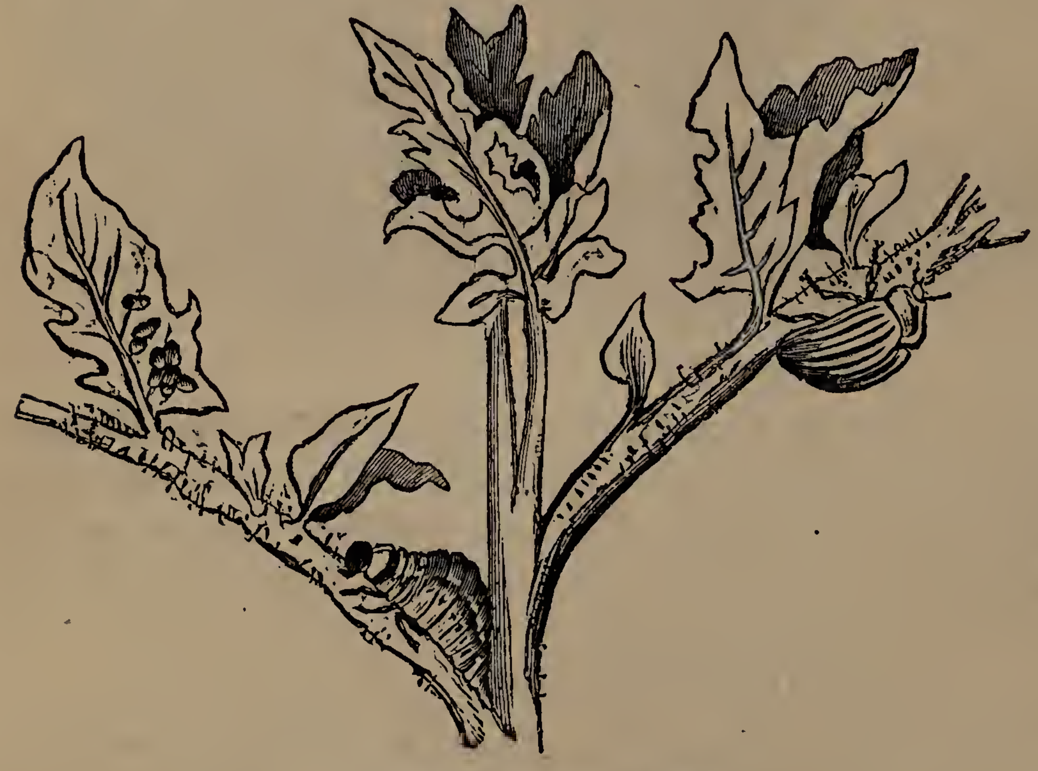
beautiful appearance. The flesh is firm, of a pleasant sub-acid flavour, tolerably good for dessert, but more valued for cooking purposes. It is in season from October to Christmas, is an almost certain and most abundant cropper, and is greatly to be recommended as a standard orchard fruit.—A. F. B.

## GARDEN GOSSIP.

SOME few weeks since we met with, in the Knap Hill Nursery, a variety of St. Dabeoc's Heath, *Dabeocia polifolia variicolor*, remarkable for the dissimilarity in the colour of its flowers. The plant, which is perfectly hardy, forms a cushion-like, low evergreen shrub, suitable, from its habit, for associating with such plants as hardy Heaths. Its chief peculiarity, however, is that its flowers are sometimes purple, sometimes white, sometimes of various intermediate shades of blush-white, pallid purple, or pink. In the majority of cases the spikes bear flowers uniform in colour, all purple, all blush, or all white, but these are so mixed up on the plant, that it appears as though two or three varieties were accidentally associated in the tuft. That they all spring from one source is, however, abundantly proved, by the fact that from time to time, and not unfrequently, there appears a spike on which both pure purple and pure white flowers are associated, or even sometimes may be seen flowers in which one-half the tube is white and the other half purple. Mr. Waterer has grown it for some years, with the view of testing the permanency of its character—which does not vary in the least.

—— In the *Adiantum gracillimum* we have one of the most elegant ferns in existence. Mr. B. S. Williams, to whom we are indebted for it, and who exhibited it at Bath under the garden name of A. elegantissimum, is not able to give any clue as to its origin, and we can, therefore, only conclude that it has appeared as a spore-sport or a spore-hybrid in gardens. Its fronds are about a foot in length, and some 8 in. or 9 in. across the widest part. They are very distinctly five times pinnate, the ultimate pinnules standing wide apart on their rachis, and having a distinct stalk, while they measure from about one-sixteenth to one-eighth of an inch in length, very few, indeed, being larger, these and a few of the longer ones being generally cut into about two or three shallow lobes; many of them, however, are not lobed, but have at the top a slit or sinus, at the base of which the orbicular indusium is situated, so that the sinus is completely filled out. The texture of the frond is very thin and fragile, and its colour is a very pale yellowish-tinted olive-green. The multiplicity of minute pinnules, and the almost invisible ramifications of the rachis, give the plant a peculiarly charming appearance.

—— THE *Colorado Potato Beetle* has been devastating the Potato crops of North America, and it is to be feared may extend its ravages to other countries. It is an inhabitant of the Rocky Mountains, where it feeds on a wild Solanum, but no sooner did the Solanum tuberosum come within its reach, than the insect attacked it greedily, and soon spread over the country. This beetle propagates with extraordinary rapidity. The first batch of larvæ appears towards the end of May, or, if the weather be mild, of April. The female loses no time in depositing from 700 to 1,200 eggs, in clusters of twelve or thirteen, on the under-side of a leaf. Within five or six days, according to the state of the weather, the larvæ escape from the egg, and begin their work of devastation, which goes on for some seventeen days, when the little creatures retire below the soil, in order to undergo the pupal condition. After a delay of ten or fourteen days, the perfect insect comes into being, and the business of egg-laying commences anew. In this way, according to recent observations, three broods follow each other; the last wintering below the surface of the ground. No description can do justice to the marvellous voracity of this insect, especially in its larval state. When once a field of potatos has been attacked, it is in a few days changed into an arid waste. Moreover, the beetle in its different stages is so entirely unaffected by the extremes of heat and cold, of wet and dry, which it has met with in America, that it may be expected to care as little for the changes of climate which occur in the temperate zone of Europe, and once settled, will quickly become naturalized. Hand-picking is the only remedy yet discovered, but even this requires caution, as the juice of the crushed insect blisters the skin. The eggs are of a deep orange-yellow; the larvæ are, at first, of a blackish hue, which passes quickly into a dark red, with a slight orange tint, but on attaining their full size the colour varies between orange, reddish-yellow, and flesh. We have to thank the publisher of *Science Gossip* for the use of the woodcut.


COLORADO POTATO BEETLE.

—— A SECOND Edition of *Lindley and Moore's Treasury of Botany* has recently been published by Messrs. Longmans, with such emendations as it was practicable to make in the stereotyped text. A supplement contains articles on various genera previously omitted, or published since the issue of the first edition, together with sundry rectifications of the original text. As the majority of the articles are contributed by well-known botanists, we may without egotism say that it is the most useful handy-book of reference we know, on matters which come within its scope.

—— Those who are at all familiar with the lovely Erica herbacea carnea will be prepared to appreciate at its full value a new white variety, which bears the name of *Erica herbacea alba.* The plant has the true dwarf tufted habit of E. herbacea, and the flowers are of the purest white. We saw it a short time since at the Knap Hill Nursery; as yet, we believe, it is very rare.

—— In New York the extreme *Hardiness of Clematis Jackmanni* has been fully tested. A recent letter from thence states that the writer had a plant of C. Jackmanni on a pillar which withstood, entirely unprotected, a temperature of 14° below zero during the winter, and of 110° above during the summer, subject to winds and storms. Surely, it is added, these plants are hardy enough for any climate which does not knock the mercury out of the bottom of the thermometer.

—— Dr. Regel has recently published an interesting note on the Vines of North America, China, and Japan, according to which the *Cultivated Vine* is not of pure specific descent, but is a hybrid between *Vitis labrusca* and *V. vulpina,* both of which are natives of North America, Japan, Mandchouria, and the Himalaya. M. Regel arrives at his conclusions from the following considerations:—1, The Vine is not known in a truly wild state, but only as an escape from cultivation; 2, the two species, labrusca and vulpina, are wild in the district of Asia where the cultivation of the Vine originated; 3, the European Vine introduced into America has never given such good results there as have the varieties of labrusca and vulpina.

—— The *Calluna vulgaris cuprea* is a very remarkable hardy Heath, or Heather, grown by Mr. Waterer, of Knap Hill. It is most effective throughout the winter season, in consequence of the whole of the young growth changing to a bright coppery hue, after the manner of Biota orientalis elegantissima.

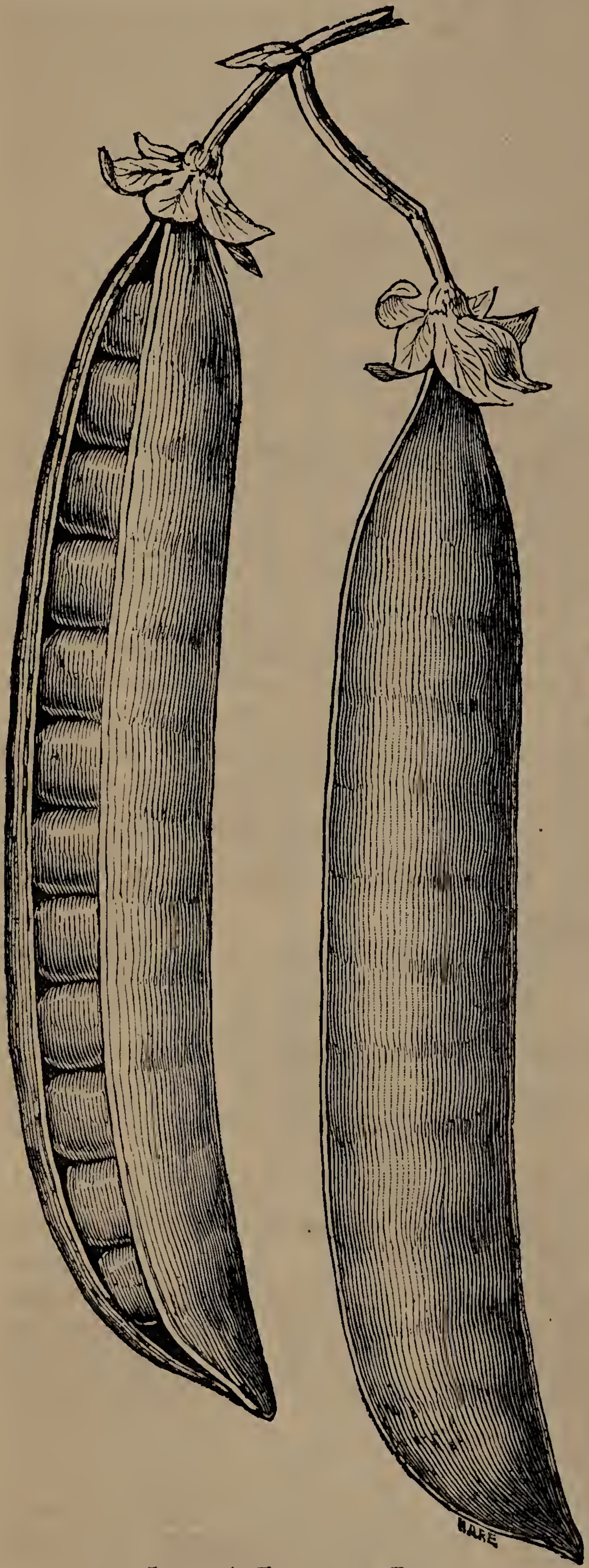
## Obituary.

—— Charles Lawson, Esq., of Borthwickhall, died on December 21, 1873, in his 79th year. He was son of Mr. Peter Lawson, the founder of the eminent nursery firm of that name, which, under the style of Peter Lawson and Son, he raised to a degree of unprecedented success. He was a few years since elected Lord Provost of Edinburgh, and amongst other distinctions, was a prominent member of the Highland and Agricultural Society.

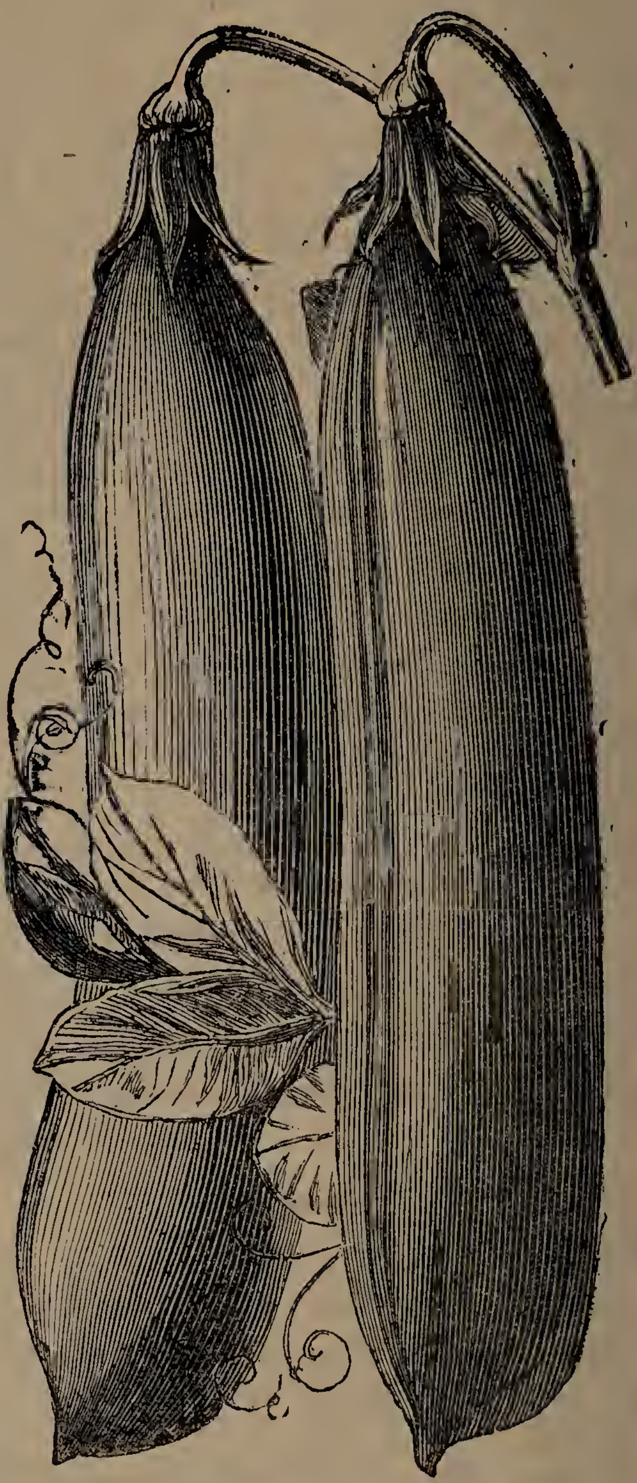
—— W. R. Morris, Esq., Engineer to the Kent Waterworks Co., Deptford, died on January 11, aged 65, under very distressing circumstances, having been found lying dead in his own grounds. He was highly esteemed amongst florists and horticulturists as a most assiduous raiser of novelties. As a hybridiser of Pelargoniums Mr. Morris was very successful, his Variegated Zonal Prince of Wales being still one of the best varieties in cultivation; he also raised some very fine Bronze Zonals, and was generally a most accomplished cultivator, excelling, amongst other things, in his management of Pot Vines, and in his Bedding-out display.

## NEW PEAS.

We have already noted (1873, 285) the New Peas certificated, after trial, during the past year at Chiswick, namely, *Gem Dagmar*, *The Shah*, *Marvel*, *The Baron*, all seedlings raised by Mr. Laxton; and we now give illustrations of two of those of preceding years, which are beginning to find their way into the seed-shops. The descriptions are taken from Dr. Hogg's Report in the *Journal of the Royal Horticultural Society*:—



Laxton's Fillbasket Pea.



James's Prolific Pea.

Laxton's Fillbasket.—This is a cross between Laxton's Standard and Supreme. Plant very robust and vigorous, growing to about 3 ft. in height. Foliage large, pale green, of a very distinct character. Stem branching, producing from 12 to 14 pods on each, generally in pairs. The pods are very long, curved, closely filled, rounded in form, of a fine bright green colour, containing from 7 to nine good-sized peas of a fine green colour. Dried seed large, light green, flattened. A large, very handsome, and prolific pea, which received a First-class Certificate at Chiswick, where it was in bearing 123 days after being sown. It belongs to the group of Imperials.

**James's Prolific.**—This is a selection from Wonderful. Plant robust, growing to about 3 ft. in height. Stem strong and succulent, occasionally branched, producing from eight to ten pods on each, generally in pairs. Foliage large, pale green, and much blotched. Pods very large, broad, nearly straight and bluntly-ended, of a very light green colour, similar in that respect to Excelsior Marrow. They contain from six to eight very large peas, of a pale green or whitish colour, of excellent quality. Ripe seed large, white and pale green, wrinkled. An extremely handsome pea when growing, of firm and erect growth, the pods being well sustained from the stem, and nearly all being fit for use at the same time. This received a First-class Certificate at Chiswick; and in the trials there, came into bearing 136 days after being sown. It is one of the White Wrinkled Marrows.—M.

## GARDEN WORK FOR FEBRUARY.

### FLOWERS.

WITH a season so favourable to the furtherance of Ground Operations, these ought now to be in an advanced state, and what may yet remain to be done should be prosecuted with vigour. In regard to *Lawns*, all levelling and turfing should be seen to, but verges of grass should not be trimmed until danger of frost is over. So highly is a fresh verdant lawn to be prized, that no labour or pains should be spared that may tend to promote the evenness of texture and velvety hue so much coveted. Top-dress such as are patchy with fine rich soil, preparatory to renovating with seed. Favourite plants that have become poverty-stricken, even if they are of considerable age, may be wonderfully resuscitated by rolling back the turf, removing the soil down to the roots, and filling in with fresh turf and manure.

Any rearranging of *Herbaceous Plants* that yet remains to be done should have immediate attention, taking care that the soil is in healthy working condition, and planting with good balls in fresh soil. Prune and train *Climbers* upon walls and trellises. Such *Clematises* as are grown in masses should now be pruned, cutting them down closely to the ground, removing the old soil down to the roots, and dressing with rich rotten manure and fresh turf. During wet, muggy weather it becomes necessary to examine protecting materials, removing it from the plants if they show indication of damping.

The hardier sorts of *Roses* may now be pruned; such as are grown upon walls or pillars should have the old wood cut freely out, so as to give place to a sufficiency of young shoots, but defer the pruning of Roses in general for the present. Stake such as are newly planted, mulching the surface. All pot-Roses that are intended to be forced should now be pruned.

With *Bedding Plants* studious forethought is the keystone to success. The actual wants of the establishment must, therefore, now be known. When propagation has to be conducted in frames, dung, leaves, hops, and tan, present favourable media for furnishing bottom-heat, provided they are properly prepared. Though propagation should now be pushed forward rapidly, care must be taken that stock-plants are not unduly excited by heat, so as to weaken their growth. *Dahlia* roots should be examined, and scarce sorts or such as show signs of decay placed in heat; it is too early for general stock. *Centaurea ragusina compacta,* if now started in heat, pinching out the tops of the shoots, will produce an abundance of side-shoots, which root freely. Accelerate the growth of *Alternantheras*, *Coleuses*, and such plants as are required in quantities, by placing them in bottom-heat and a growing temperature of from 65° to 70°. Seeds of various kinds of plants should now be sown, including such sub-tropical kinds as *Acacia lophantha*, *Canna*, *Centaureas*, *Chamæpeuce, Cineraria acanthifolia, Ferdinanda, Geranium canariense, Melianthus major*, *Pyrethrum*, *Solanums*, *Lobelias*, *Wigandias*, &c. *Verbena venosa* should not be overlooked, as it is most effective in mixing and massing. It is readily propagated from pieces of the roots, cut up and laid upon fine soil, in a sharp heat. The rooting temperature for bedding plants should range from 65° to 70°, with a bottom-heat of from 80° to 85°. The germination of seeds will often be accelerated by steeping them in water previous to sowing. *Chrysanthemums* should be propagated from cuttings in a mild heat. The present is also a good time to propagate by means of cuttings, the varieties of *Phlox decussata* which have been started in a greenhouse. Strong cuttings rooted now and gradually hardened off to be planted out early in May will flower freely the same season, keep particularly dwarf, and form exquisite groups.

*Auriculas* should be top-dressed with rich soil, consisting of about equal parts of mellow loam, leaf-soil, and thoroughly-rotten manure, adding a dash of sharp sand. Pot off young offsets, using pots according to the quantity of roots; they do not do well when over-potted. Seeds may now be sown in light, sandy soil. Cuttings of *Carnations* which have been excited in heat will now root freely, and come in useful for autumn flowering. Seeds of these should now be sown; the plants will come in useful for cutting from, as they generally produce a large per-centage of doubles.

Proceed with the potting of *Heaths*, examining the balls previously, in order to ascertain if they are in a healthy state as regards moisture. Early-forced varieties of *Azaleas* and young stock plants should now be started in genial heat. In potting, use a sound, healthy peat, that is rich in vegetable fibre, silver-sand only being added. *Camellias* that have done blooming should be pruned into form, shifting such as require it, and examining the drainage of all. They should then be placed in a genial heat, and freely syringed. *Bouvardias*, which are so valuable for winter blooming, should be placed in heat to produce cuttings; they may also be propagated from pieces of the roots in bottom-heat. *Cinerarias* should be repotted as they require it, and insects vigorously kept down. *Pelargoniums* will, with the increasing light, grow stronger, and will require limited, but sufficient water, so that it penetrates to the ball; and give sufficient heat to admit of air being admitted daily. Finish potting, as they never flower satisfactorily unless the pots are filled with roots. Afford to the general stock full ventilation, and avoid using fire-heat to induce growth at this season.

The great majority of *Stove Plants* will require to be examined and shifted during the month, and to secure successful results it is important that the proper qualities of soils should be prepared and sufficiently aerated for use. Such plants as *Gardenias*, *Ixoras*, *Dipladenias*, &c., require peat; whilst such strong-growing subjects as *Allamandas*, *Bougainvilleas*, &c., succeed best in loam and rotten manure. The strength and nature of the roots are a sure index to their requirements. Guard against over-potting, and water sparingly until the roots get hold of the fresh soil. Advance the temperature by degrees as the days lengthen, ensuring a genial atmosphere by the use of the syringe, and airing in accordance with the state of the weather. *Orchids* should now be potted, using the best fibry peat and fresh sphagnum, incorporated with pieces of charcoal and potsherds, to insure porosity.

*Conservatories* must be frequently rearranged, removing such plants as show the least signs of decay. *Azaleas*, *Camellias*, and flowering *Bulbs*, such as *Amaryllis*, *Eucharis*, &c., are particularly effective. Keep up a succession in the forcing-house by introducing progressively such things as *Roses*, *Lilacs*, *Azaleas*, *Rhododendrons*, *Lily of the Valley*, &c., all of which will force easily after this time.—George Westland, *Witley Court.*

## FRUITS.

*Pines:* Attend to last month's directions in regard to succession Pines in dung-pits; give more air in good weather as the season advances, and avoid too much moisture. Keep up a moist heat in the fruiting-house, and water those freely that are starting into fruit; syringe in the afternoon, if much fire-heat be necessary; if fresh tan has been used, see that the bottom-heat is not too violent, as great injury to the plants is often caused in this way. Prepare good turfy loam, mixed with one-fourth rotten dung, and keep it moderately dry, to be in readiness for shifting the plants at the end of the month. This is a good time to plant out fruiting Pines, either before or after they show fruit; plant them on ridges of turfy loam and rotten manure, on a good bed of leaves, which is the best, as it will retain sufficient bottom-heat for many months.

*Vines:* If the fruit is set in the early house, use the syringe, and maintain a moist growing atmosphere; give a good portion of air in fine weather, in the early part of the day, but close the house early in the afternoon; tie-in the shoots, and stop all laterals down to the last bud; continue to thin the berries as they may require it, and do not leave more than *one bunch* to a shoot. Attend to previous directions for the management of the succession-houses. Plunge pot Vines if possible, otherwise stand the pots on turf, and well supply those in fruit with liquid manure; thin the bunches to about six or eight for a 12-in. pot, and remove all useless growth. Put in Vine-eyes early in the month, place them in striking-pans, and plunge them in a bed with a bottom-heat of 80°.

*Figs:* Those being forced in pots should have plenty of water, and if the pots are full of roots, liquid manure should be given once a week; keep a moist night temperature of 55° to 60°, and air freely through the day. A night temperature of 55° in the succession-house, with a rise of 15° degrees by sun-heat, will suffice. Syringe the trees, and close early.

*Peaches and Nectarines:* Attend to the disbudding in the early house, removing or stopping-back all strong shoots not required to furnish the trees. Watch for the attack of green-fly, and fumigate with tobacco at its first appearance. As soon as the fruit is properly set, use the syringe freely, and raise the night temperature 5° or more, according to the state of the weather; the day temperature also in like proportion, and air freely in bright weather. See previous directions for others not so far advanced.

*Cherries:* Give a night temperature from 50° to 55° till the trees are in bloom, when abundance of air must be given. The temperature with sun-heat may range 10° or 15° higher. *Plums* require similar treatment, but require more water at the root than Cherries.

*Strawberries:* Place those in bloom in a situation where they will have the advantage of plenty of air and light; and when the fruit is properly set, this may be removed to a warmer place; clip off the small blossoms, and water occasionally with liquid manure; bring in more plants for succession.

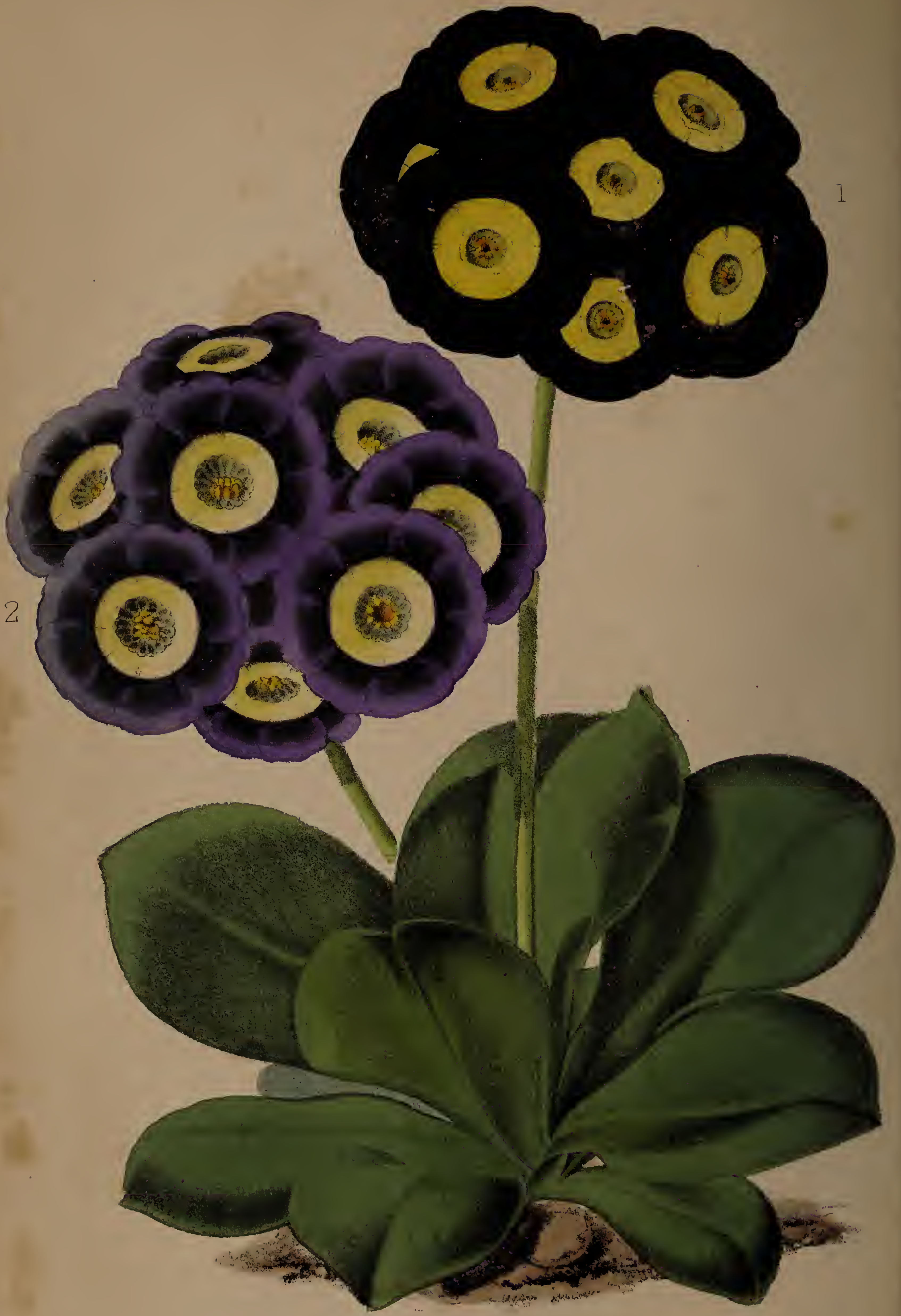
*Melons:* Keep up a good growing heat of 65° to 70°, allowing a rise of 10° during sunshine; close the frames early; sow more seed for succession.

Out-Doors.—Owing to the mild weather of last month, the buds of the *Apricot* will be in a forward state, therefore no time should be lost in getting the trees pruned and nailed, and the covering in readiness, in case of sharp frost. If any covering thicker than a net be used, it should be so arranged that it can be easily removed in the day-time. Proceed at all favourable opportunities with all pruning, nailing, &c., and finish planting all small fruit-trees before the month is out. Make new plantations of *Strawberries* in well-manured ground. Clear out and top-dress with rotten manure those that are growing in beds thickly together. Stake and mulch newly-planted trees. Any glass structures that are not artificially heated, such as glass-cases, orchard-houses, &c., should have abundance of air during sunshine, to prevent the trees getting too forward. The trees should be all pruned, and top-dressed with loam and rotten manure. Give those in pots a good soaking of liquid manure if they are dry, and plunge the pots if convenient to do so.—J. Powell, *Frogmore.*

## VEGETABLES

Much will have been done in this department during the previous month towards the preparation of the ground for the main spring crops, but if any digging or trenching still requires doing—the ground being vacant—the work should now be got through with all possible despatch. I referred last month to a few subjects which ought to be sown as early crops, and again suggest that a successional batch of seeds be sown of either *Peas* (main early sorts), *Broad Beans*, &c., towards the middle or end of the month. It is also judicious to make an early sowing about the end of the month of *Spinach*, *Radishes*, *Lettuces, Endive*, &c., and a planting of *Potatos* (early kidneys) about the third week of the month. They must be sown, however, upon a warm, sunny aspect, at the foot of a wall or fence, by which means a valuable early supply may be secured. Make up the plantations of autumn-planted *Cabbages* from the store-seed beds where such exist. If no autumn-sown plants remain, it will be necessary to make a sowing upon rich soil placed in shallow pans or boxes. It would also be judicious to sow in like manner a small quantity both of *Broccoli* (Walcheren and Snow's) and of *Cauliflower* (Early London). The seedlings, if they are transplanted into other pans or boxes so soon as they are sufficiently large to handle, and are slightly "nursed" on until they are large enough, and the season has sufficiently advanced, may be planted out very early, and will furnish heads of valuable produce many weeks before those grown from seeds sown in the open ground a month or two later. Earth up the rows of all autumn-planted *Cabbages*, and use the hoe freely between all growing crops of *Spinach*, young autumn-sown *Carrots* (Short Horn), *Onions*, &c. These all delight in having the soil moved freely between them, and it conduces greatly to a free and permanent growth when this slight attention is accorded them.

Keep up a brisk heat in *Cucumber*-houses and pits proper, during the lightest and brightest part of the day—always, however, with some amount of fresh air, the more the better, so long as the above conditions are maintained. As the days lengthen, and with them both the duration and intensity of the light, a little more moisture may be diffused throughout the structure; a slight increase of the night air may also be permitted with advantage. Be particular at this time not to permit too many fruits to swell off, as all the spare resources of each plant should be harvested, in view of giving the plants as vigorous a start as possible, preliminary to their abundant early spring fruit production. To tax their strength too greatly at this time, would be to lessen their fruitfulness in the future. Sow seeds of *Cucumber*, where symptoms of exhaustion are exhibited by the plants in any structure.—William Earley, *Valentines.*



ALPINE AURICULAS

1 Napoleon III _ 2 Susie Mathams.

J. L. Macfarlane Del et Zinco

F Wall

# ALPINE AURICULAS.

WITH AN ILLUSTRATION.

FEW of our popular flowers have, during the last few years, made greater strides towards perfection than the Alpine Auriculas, of which wonderfully fine groups have been staged each succeeding spring by Mr. Turner, of Slough. It is to this well-known successful grower of florists' flowers that we are indebted for the opportunity of figuring two of the most distinct and attractive of these alpine forms, both of which were awarded First-class Certificates by the Royal Horticultural Society in May last.

The variety named Napoleon III. (fig. 1) is remarkable for its dark crimson-maroon ground-colour, and clear, smooth, golden paste; it is a richly-coloured and highly attractive variety, of extra fine quality. Susie Mathams (fig. 2) is quite distinct, and is also a very pleasing flower; the ground-colour is a deep purple, shaded off at the edges to bright lilac, and the paste is smooth and straw-coloured. Though not considered equal in value to the show Auriculas, these Alpine varieties are exceedingly pretty objects, and most desirable as decorative plants from their well-marked colours.—T. Moore.

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# ROSES AND ROSE-CULTURE.

## Chapter XIX.—Monthly Calendar.

JANUARY.—Graft new and other Roses in heat under glass. Clean dead and decaying leaves off pot-Roses under glass, cleaning and loosening the surface of the soil at the same time. Place roses in a house, with gentle heat, to obtain flowers in March. Prune pot-Roses under glass to flower in May and June. Finish up any arrears of autumn work during this and the following two months, as the weather and state of the ground may allow.

February.—Tie-up pruned pot-Roses. View, smell, and gather (if you wish) the early forced flowers, which should now be in bloom. Continue grafting pot-Roses under glass, if a further supply is wanted. Place a fresh supply of pot-Roses in heat to flower in April. Cut wild shoots off Rose-stocks budded last autumn.

March.—Continue tying-out pot-Roses, after having pruned for the summer flowering. Prune all unpruned Roses in pots. Cuttings may be taken from forced Roses, and placed four or six round a five-inch pot, rooting them in a frame or house with bottom-heat. If any Roses have been layered, take off the layers now and replant them, watering them in dry weather throughout the spring and summer. The soil around cuttings planted in the open ground in autumn should be trodden and hoed. Finish transplanting and pruning this month; newly-transplanted Roses are, in my judgment, better left unpruned till now. As a general rule, in pruning, thin-out in November, and shorten the shoots left on early in March.

April.—As the sun gains power, Roses in pots will require a more liberal supply of water; clear and weak liquid manure is best, and the quantity should be gradually increased until the first flowering is over, and then gradually diminished until the new or second growth begins. Cuttings may still be made from plants under glass. Search diligently for insects and destroy them, both in and out of doors. Tie-up the young shoots of last year's budded Roses, removing suckers from these and all others. Remove also few or many—few, if a mass of flowers is preferred to a smaller number of large flowers—of the bursting buds when about half an inch long, leaving those which occupy the best positions for developing a regular-shaped and handsome head. Stop any individual shoots—now and hereafter during the growing season—that may show excessive vigour. Water newly-transplanted Roses, if the soil becomes dry.

MAY.—This is an important month to the exhibitor of cut Roses, although the work of no one month should be neglected or done out of order. First prizes are generally lost and won in this month. Keep down insects. Eradicate wild shoots. If growing for exhibition, destroy flower-buds unsparingly when not larger than peas, leaving very few on a plant. Water freely if the soil becomes dry, which it often does about the end of the month. Cuttings taken from under glass in March and April may be potted off now, and placed in single pots in heat under glass. Manetti stocks *may be* budded this month, both in and out of doors. In light soils a top-dressing of manure may be laid on with advantage about the middle of the month. Harden-off forced Roses preparatory to their removal out of doors. Sulphur freely, dusting it on the leaves both in and out of doors now and at any other time, if mildew appear. Destroy green-fly by smoking the plants under glass, and by syringing with quassia-water out-of-doors.

JUNE.—Forced Roses, which should have been gradually hardened during the last month, may now be placed out of doors. Roses in pots yet to bloom should be freely watered. Remove superfluous shoots from Rose-stocks out of doors preparatory to budding. Continue tying-up newly-budded Roses. Look after and destroy grubs, caterpillars, &c. Water freely if the weather is hot or the soil dry. Shade blooms for exhibition slightly; drive, flog, coax, and wheedle them by turns, and if you are resolved to "go in and win," get some milliner to "dress" them for you. Cross some of the best and earliest flowers.

JULY.—Repot young plants and old ones too, when they require it. Layer Dwarf Roses of any sorts where an increase of stock is required. Continue tying-up the plants budded last year, and remove the snags from the centre and sides of the head. Trim stocks for budding. Commence budding, and do as much of it as possible this month. Cut back to three or four eyes the principal shoots of a portion of the plants to strengthen the September bloom, feeding the plants well afterwards either with a top-dressing of rich manure or by constant supplies of manure-water. Water freely, if the weather is hot or the soil dry.

AUGUST.—Almost all the operations described as necessary during the last three months may require to be repeated during this month. Budding may be continued, and the buds put in early in July should now be untied.

SEPTEMBER.—Turn out of the pots and examine the roots of all pot-Roses.

Place in larger pots such as require it, and remove as much of the old soil as possible without injuring the roots, replacing with fresh soil where larger pots are not required. If new plantations are to be made, manure and trench the ground, throwing it up in ridges that it may be mellowed by the influence of sun and air. Carry on the operations of the preceding summer months. Continue untying buds.

October.—Pot Roses from the ground for forcing a year hence. Place under glass all pot-Roses that have been out of doors during the summer. Towards the middle or end of the month, cuttings of the ripened wood may be put in, either under glass or in the open borders. Remove from budded stocks all shoots but the one budded, leaving this intact till February.

November.—Prune pot-Roses for February flowering. Gather Rose-seed, to be cleaned and sown next month. Choose early this month plants to form new plantations, or to make up old ones. Plant in well trenched and, if wet, well-drained soil, thoroughly enriched. Stake and tie the plants immediately after planting. Plant when the ground is in a tolerably dry state; this is of more importance than any fancy date. Spread the roots well in planting, and if the soil be heavy and in lumps, which all good rose-soils are, knock it to pieces, and place the small particles in immediate contact with the roots, or if this is impracticable, then use a little lighter soil for the purpose. Never let the points of the roots turn upwards in planting. Towards the middle of the month place fern-fronds, asparagus haulm, beech boughs, or any evergreen branches, loosely among tea-scented Roses. Plant briars and Manetti cuttings for budding next summer. Prune so far as thinning out all supernumerary shoots, leaving the shortening of those left to be done in February or March.

December.—Place pot-Roses in a house with gentle heat, to obtain flowers in February. Prune pot-Roses for March and April flowering. Sow Rose-seed in narrow beds or drills out of doors. Manure freely, and dig in the manure in all Rose beds.—William Paul, *Paul's Nurseries*, *Waltham Cross*, *Herts.*

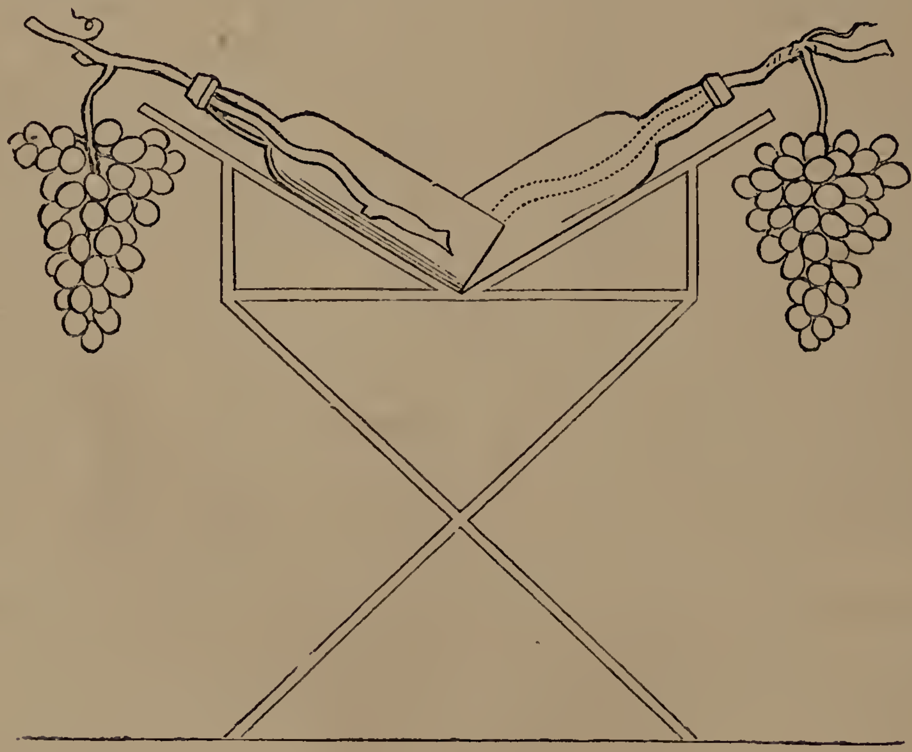
## WALL ASPECTS SUITABLE FOR FRUIT-TREES.

PERHAPS this subject is not so well attended to as it deserves. The aspect for some kinds of fruit-trees may be varied with success according to the locality and soil in which they are planted, for in some situations one sort may require a south aspect, which in others will do equally well against either an east or west aspect. Therefore the distribution of the trees depends upon existing circumstances. It is necessary, however, always to avoid planting a tender sort of fruit-tree in a cold, bleak situation, where the sun's influence does not operate; for although the soil may be suitable, yet the tree will prove unproductive, and the fruit worthless in flavour. The undue attention to aspect and soil, accounts for so much fruit being of poor quality and inferior in size, for without the full influence of the sun upon the border and tree, fruit that is at all tender and good in flavour cannot be expected. Always avoid an east aspect for trees that blossom early in the spring, as in that aspect early blossom is very liable to be injured by frost and cutting winds.

Where there is a great extent of wall, as is the case at Hatfield, it is advisable to plant trees of the same kinds against different aspects. This is the better way to secure a crop, and the fruit will ripen in succession, and thus prolong the season. It is likewise a good plan to plant the early-blooming kinds together, for those trees that bloom some three or four weeks in advance of the others, will require a greater amount of protection; and if early and late-flowering kinds are mixed indiscriminately together, the late sorts that do not require protection so early, will be injured by excessive covering.—Edward Bennett, *Gardener to the Marquis of Salisbury*, *Hatfield House*, *Herts.*

## ON KEEPING LATE GRAPES.

Last season we tried with success, though on a small scale, the French system of keeping Grapes in bottles of water. On the 19th of December we cut 50 bunches, consisting of Muscat of Alexandria, Alicante, and Lady Downe's Seedling. We put them in bottles filled with clear water, without charcoal or anything else put into the water, which, notwithstanding, was perfectly sweet when emptied out. The Grapes were put in a room over the hall kitchen, and kept quite dark; no fire was lighted in the room, as, in consequence of the heat from the kitchen below, it was all that could be desired for the purpose. The mean temperature of the room was about 45°—quite enough to exclude frost and damp, both of which are very damaging to ripe Grapes.



I found that this method of keeping Grapes effected a great saving of fuel, as we kept some of them nearly two months without any expense, the last of the Lady Downe's being used only a few days since (February 14), and they were then as fresh as when first cut from the vines. The Alicantes kept equally as well, but the

Muscats shrivelled a good deal. One other great advantage was, that there was comparatively speaking, no loss of berries, or but very few, at the most. They did not average fifty during the whole time these fifty bunches were cut and in water, and where there happened to be a mouldy berry, it did not, in the dry room, affect the others, as is the case in the damper vinery. The bottles were placed on trussels in a leaning position, so that the Grapes hung over the boards, as shown in the accompanying sketch.

I hope some of the readers of the FLORIST AND POMOLOGIST will give their experience as to keeping Muscats, as it is one thing to grow them well and another to keep them uninjured.—WILLIAM PLESTER, *Elsenham Hall Gardens.*

## ERICA CODONODES.

THIS is a very pretty winter-blooming Heath, and well deserves extensive cultivation, being quite hardy and a profuse bloomer. We have several plants which have been in bloom from the end of October last, and which are now (February 17) objects of great beauty. The habit is stiff and erect, similar to that of the greenhouse *Erica hiemalis*, the flowers white, prettily tinted with bright pink on part of each flower. The plants have withstood the last six winters without the least protection, and the flowers seem to bear frost without injury to them. Altogether it is a very desirable plant for the winter garden, for which situation it is used here. It would also do well for conservatory work, as it far surpasses in beauty many of the small-flowered section of greenhouse heaths, such as *E. Caffra nana*, and similar kinds.—H. CHILMAN, *Somerley.*

## THE NEW HOLLYHOCKS OF 1873.

THERE is no falling-away in the work of improving the Hollyhock. This laudable task, which has enlisted the energies and given zeal to the enthusiasm of some of the most accomplished of the florists of these as well as past days, never falters ; if one worker falls away from the path of progress, another steps in and takes the vacant place ; and the unbroken march is preserved to the end.

Perhaps it was mainly owing to the accident of the adaptability of time, but it is a fact, that a greater number of New Hollyhocks than usual found their way to the meetings of the Royal Horticultural Society during the summer of last year ; and some idea of their high-class quality may be inferred, when it is stated that not less than eight varieties received First-Class Certificates of Merit. Of these, the following were raised by the Rev. Lord Hawke :—*Catherine*, deep flesh, the flower very full, and of a very pleasing soft hue of colour ; *Lilac Queen*, bright rosy lilac, tinted with a pleasing silvery sheen, and forms a fine spike for exhibition purposes ; *Octavia*, pale pink, with a deeper tint in the centre, a charming hue of colour, the flowers of fine quality; *Red-Cross Knight*, shining maroon-crimson, the flowers large and of full substance, and very striking colour ; *Vanguard*, blood-maroon, very bright, a noble spike for show purposes ; and *William Chater*, a novel and finely-shaped flower of high-class quality, colour bright yellowish-buff, shaded with salmon in the centre. Mr. William Chater is now distributing *Octavia* and *William Chater;* also *Eleanor*, one of Lord Hawke's seedlings, a greatly improved Willingham Defiance, of a soft pale rosy hue, and forming a fine spike; this was Certificated in 1872.

Mr. Chater received the same high award for *Fire King*, bright pale red, a fine hue of colour and excellent quality, and most effective when shown as a spike; and *Mrs. Chater*, pale flesh, tinted with salmon in the centre, very bright and pretty, and fine spike. Both of these are being distributed. Of other new varieties, Mr. Chater has *Goliath,* vivid scarlet, a large and bold flower, of fine quality; *Rosy Morn*, clear cerise, large, full, and symmetrical, and a grand spike; *Talisman*, pale creamy flesh, with a dark base, tinted with crimson in the centre; and *Vesta*, clear lively flesh, a novel shade of colour, large, and of first-class quality.

The intelligence recently given by Professor Thistleton Dyer as to the invasion of our gardens by the new cryptogamic parasite, Puccinia Malvacearum, which, it appears, is extremely destructive to the Hollyhock, cannot help causing uneasiness to cultivators of this noble flower. Some twenty years ago, a species of disease, something in the form of dry-rot, which eat its way into the leaves of the Hollyhock with great rapidity, and worked much mischief, assailed many plantations of Hollyhocks, and decimated them something after the fashion of the Potato disease. Beds of seedlings were especially open to its ravages. This yet lingers among us; and now to have a second destroying agent appearing, bodes ill for the future of the Hollyhock. The breed has become so refined, that it is just possible it is, in consequence, more open to the attacks of the pests in question. With respect to the new destroyer, Professor Dyer tells us:—"Unfortunately, up to the present time, no remedy for it has been found, and the only safe advice that can be given is to destroy the plants, root and branch, as soon as the cryptogam makes its appearance, and so do all that is possible in order to stamp it out." But what an uncomfortable out-look for raisers of Seedlings!—R. DEAN, *Ealing.*

## DOUBLE-FLOWERED PORTULACAS.

HAVE these been successfully cultivated in England? They are wonderfully showy in this country, and work in admirably for bedding in the best arranged flower-gardens. Moreover, they are especially appropriate as flowering-plants where succulents are extensively employed. The colours being very bright and varied, and the flowers are double as roses, they make a wonderful show. I have a bed sown in May, which commenced to flower early in July, and is now (October 14) a mass of flowers, without getting shading or requiring any attention, except that weeds were kept down until the ground was covered.

I sow in drills 9 in. apart, and the plants soon form a compact mass of growth and flower. In England it would be necessary to sow in-doors, and transplant when the outside soil had become warm, but that has to be done with many less showy plants. Probably it would not make so good a show for as long a period as here, for want of the bright sunshine which we have during most of the year.—James Taplin, *South Amboy*, *New Jersey.*

## GRAPES: THEIR PECULIAR DEFECTS.

THERE are but few varieties of Grapes which do not possess some peculiar defects or imperfections of constitution; or perhaps more properly speaking, nearly every variety, through improper culture, appears predisposed to peculiar faults which materially detract from its value. This is an imputation from which even the most prized and popular varieties are not exempt.

The *Muscat Hamburgh,* one of the best of Grapes, is liable to the serious defect of swelling its berries unequally; *Mrs. Pince's Black Muscat* is open to the same objection. The latter kind, as well as the *Muscat of Alexandria*, is not only an indifferent setter, but is seldom seen perfectly coloured. The magnificent and much abused *Golden Champion* generally exhibits one or more dark spots in each berry. The *Chasselas Musqué*, the *Royal Ascot*, and the *Madresfield Court Muscat*, possess the evil tendency to crack open when nearly ripe; and even the old favourite *Black Hamburgh* is not wholly free from fault, but frequently presents unseemly scars and bands of rust on the skin. These defects are not only produced in some varieties, by certain conditions of climate or cultivation, but at the same time, the like treatment seems perfectly to agree with other varieties, it being no uncommon occurrence for these faults to be plainly visible in some kinds, while others growing beside them in the same house—nay, even on the same vine, may be seen quite free from any characteristic blemish.

If these imperfections were permanent, it would seem a hopeless task to attempt to eradicate or ameliorate them; but it has been proved that they are not only not permanent, but that they are found to yield and even disappear altogether under certain special conditions. Should not our aim then be to endeavour by every possible means to ascertain what are the peculiar requirements of each variety, and to supply those requirements, in every detail, with the strictest accuracy? Some gardeners may perhaps question the propriety of growing certain of the varieties mentioned, seeing that they are subject to such defects; but on second consideration, they will, I think, hesitate to condemn them, for even the worst possess sufficient good qualities to ensure them a place in our vineries.

The principal and most important questions, and which are deserving of particular attention, appear to be these—First: What are the especial details of treatment required by each variety? Secondly: Which varieties will succeed perfectly under precisely the same conditions? Thirdly: Which are the particular kinds requiring separate or special treatment?

Having as nearly as possible ascertained these particulars, those kinds only should be grown together which are found to succeed perfectly, under the same *régime;*

and those which require special treatment should be grown in separate houses. It may be objected by some, that this system would prevent those persons with limited space growing many good varieties, but I would ask, Is it not more satisfactory to see a house well filled with perfect grapes of one or two kinds, rather than a dozen kinds, a moiety only of which are worth inspection; and this arising from circumstances which cannot be rectified, so long as they are indiscriminately subjected to the same treatment, regardless of their peculiar wants?

Having ventured to make these few remarks by way of opening a most interesting subject, I will, in a future paper, give some details of successful as well as unsuccessful culture, trusting thereby to induce others to chronicle their experience, so that, if possible, we may generally arrive at a more perfect theoretical and sounder practical knowledge of this most important branch of horticulture.—T. C. W.

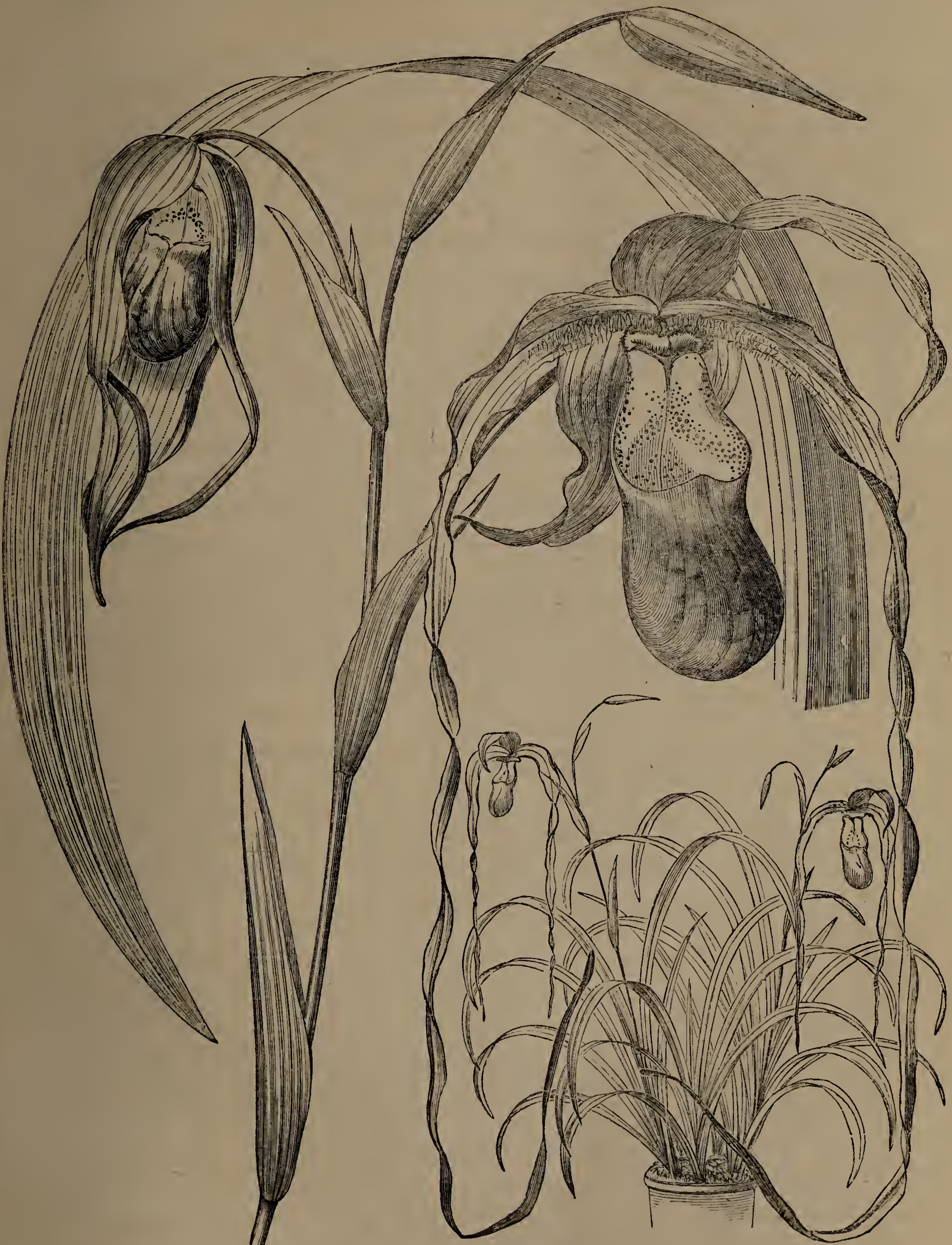
## ULMUS BERARDI.

NOTHING more curious and distinct is met with amongst deciduous trees than this Elm, which in its general appearance has, so to speak, nothing in common with other Elms. It was found, M. Carrière tells us, in 1865, at the Nursery of MM. Simon-Louis frères, of Metz, in a seed-bed of common Elm. In its foliage *U. Berardi* recalls that of *Comptonia asplenifolia.* It constitutes a very bushy shrub, with excessively slender ramifications; its leaves are set on very close together, and are rarely spread in a distichous manner, excepting sometimes on the vigorous branches; they are of a very deep green colour, small and irregularly notched, in the fashion of those of *Planera crenata*, and generally set against the branches, which they hide almost entirely. It is a shrub but little known, and also one of the prettiest and most curious of its family, which cannot be too much recommended for ornamental planting.

## CYPRIPEDIUM DOMINIANUM.

HYBRID Orchids have met with objectors in the persons of those who have feared or fancied they would upset all our present notions as to species limitation. They have, on the other hand, been welcomed by cultivators generally, and many real acquisitions owe their origin to the mysterious art of the hybridiser. The genus *Cypripedium* has furnished several of these novelties, perhaps more than any other family, and these we owe chiefly to the skilful manipulation of Mr. Dominy, one of the *chefs* in Messrs. Veitch and Sons' establishment at Chelsea. That Mr. Dominy's name should be attached to one of these plants is, therefore, most appropriate.

The parents of the beautiful hybrid, of which, thanks to Messrs. Veitch, we annex a figure, were *C. caudatum* and *C. Pearcei*, and it is very interesting to observe that almost every organ is intermediate between those of the two parents. The leaves are linear-ligulate and arching, broader than in *C. Pearcei.* The spike bears three or more flowers, which expand simultaneously, and while the



CYPRIPEDIUM DOMINIANUM.

colours are nearly those of *C. caudatum*, including the distinct blotches on the inner portion of the lip, the size is intermediate, the petals averaging about six inches in length. From *C. caudatum* it may, however, be at once known by its acute spathaceous bracts; and from *C. Pearcei* by the transverse staminode, and the hairy ovary.

It is a plant of remarkably free growth, as well as a free bloomer, throwing up its flower-spikes well above the mass of graceful foliage. These qualities, no less than the intrinsic beauty of its flowers, recommend it to the notice of Orchid-growers. It was awarded a First-class Certificate at South Kensington in June, 1870.—T. M.

## SERICOGRAPHIS GHIESBREGHTIANA.

THIS pretty free-growing soft-wooded stove plant is very valuable for decorative purposes, on account of its property of flowering during the winter. It is easily propagated by cuttings, prepared in the usual way, and placed in a gentle bottom-heat. It grows freely in a compost of equal parts of loam and peat, with a little sand. Young healthy plants that were struck the previous autumn should be selected early in spring, and when they begin to grow they should be shifted into larger pots, and the young shoots when about 3 in. high stopped. As soon as the plants begin to fill the pots with roots give them another shift. Keep them steadily growing during the summer months, and tie out the shoots neatly as they advance in growth. It is rather subject to the attacks of green-fly; if any appear, fumigate immediately with tobacco-paper. As they are easily grown, and as they flower during the winter, a considerable quantity of plants should be grown where cut flowers are in daily demand at that season.—M. SAUL, *Stourton*, *Yorkshire.*

## THE APPLE: ITS CULTURE & VARIETIES.—CHAP. VI.

WITH reference to the distances at which the trees should be planted, I have already advised, and it may be well to remind the amateur of this, that Pyramids and Bush-trees should be planted comparatively close together in the early stages of growth, the distance between them to be increased by successional liftings as they advance in size. These liftings, if performed at regular intervals of, say, two years, or at the very farthest, three years, will answer all the purposes of root-pruning, until the trees arrive at such a development that it becomes necessary to plant them at their permanent distances, which may range from 12 ft. to 15 ft., according to the vigour of the variety. It is when they are well established in these positions that root-pruning proper may commence, its necessity or otherwise being determined by the general growth of the tree. If the tree bears a sufficient quantity of fruit every year, and at the same time keeps up a moderate supply of healthy, fruitful wood, let well alone—root-pruning is not required. If, on the contrary, there are few fruits, and a strong development of growth, root-prune at once.

The operation may be performed in this way:—In October strike round the tree a circle, with a radius of 2 ft., or rather less if the tree is small, and another circle having a radius of 3 ft. 6 in.; then dig out the soil between these two lines to a depth of 2 ft., cutting off every root clean to the side of the ball of earth surrounding the tree. Next try, by carefully pressing against the stem of the tree in various directions, if there are any strong roots under the ball. If there are, they must be carefully reached, and divided with a sharp tool; but if on applying pressure it would appear easy to heel the ball over, no further cutting is necessary, and the earth, with a little addition of fresh compost, may be returned to the trench, and the operation is finished.

Trained Espaliers and Cordons, although requiring equal attention with the above as to root-pruning, ought not to be subjected to periodical liftings, but should from the first be treated more in the nature of permanent trees; they should therefore at once be planted at the full distance of 15 ft. apart, and the root-pruning, when the growth shows its necessity, must be performed by undermining the tree, on both back and front, and severing the largest roots. If it appears desirable to occupy for a few years the space between the trees, it may be done by planting one or more of the slow-growing prolific sorts on the Paradise stock, not training them, but merely fastening them to the trellis, and removing them as soon as the points of the Espaliers approach them. Perhaps for the purposes of the amateur gardener the spaces might be more profitably utilised by planting strong gooseberry bushes, and training the shoots upright, in a manner which I hope to detail in a future paper on that subject.

I would here observe that my reason for impressing on the mind of the amateur that lifting and root-pruning should be performed in October, is that he may not lose the chance of the next season's crop, which he would certainly run the risk of doing, if the operation were deferred until the depth of winter or the early spring. This, again, brings me to another important point in the culture of this fruit on the restrictive system. The professed object of this system is to obtain abundance of fruit, but having attained that object, we must beware that we do not take too great an advantage of the generous produce; we must not forget that the production of fruit is the most exhaustive process to which the tree can be subjected, and if we do not apply the same principle of restriction to the production of fruit as we do to the production of growth, the constitution of the tree will suffer, and this would involve the necessity of a season of rest from fruit-bearing, to restore the power of producing it. Now the amateur, with only a limited number of trees to deal with, can so regulate the production of fruit, that it shall not interfere with the proper functions of the tree with regard to the future produce. This end is to be attained by timely and severely thinning-out the clusters of fruit wherever they are too thickly set, retaining only the most perfect and best-shaped of them, by which means the trees will have the best chance of exercising those natural functions which are necessary to the formation of future fruit-bearing growth, and their owner will have the satisfaction of finding the quality of his fruit greatly improved. In reference to this, it should be remembered that where every fruit is good and fit for the table, the result is far more satisfactory than when quality is sacrificed for a greater quantity.—JOHN COX, *Redleaf.*

# NOTABLE NEW PLANTS AND FLOWERS.

[F.C.C. = First-class Certificate.]

ABIES POLITA [F.C.C.].—A very distinct and handsome conifer, of slow growth, and reported to be quite hardy.—*Messrs. Veitch & Sons: R.H.S., Dec.* 3.

ALSOPHILA ELEGANTISSIMA [F.C.C.].—A handsome Brazilian fern, with a dark scaly caudex, and bold arching bipinnate fronds, the pinnules of which are oblong, crenately-toothed, and glossy on the surface.—*Mr. W. Bull: R.H.S., Feb.* 18.

ANGRÆCUM CITRATUM [F.C.C.].—A small-flowered Madagascar species, having a slightly arched spike, on the upper side of which are two regularly disposed parallel rows of small creamy-white blossoms, the spurs of which are conspicuous beneath.—*Messrs. Veitch & Sons: R.H.S., Feb.* 18.

BARKERIA LINDLEYANA CENTERÆ [F.C.C.].—A beautiful and distinct form of *B. Lindleyana*, with a handsome blotched column. A fine addition to the winter-blooming Orchids.—*Messrs. Veitch & Sons: R.H.S., Dec.* 3.

BATEMANIA BURTII [F.C.C.].—A very distinct Orchid, bearing some resemblance to *Odontoglossum grande,* having large stout reddish-brown yellow-dotted flowers, yellow at the base, the lip white, tipped with chocolate.—*Mr. W. B. Hume: R.H.S., Nov.* 12.

CHRYSANTHEMUM GEORGE GLENNY [F.C.C.].—This was originally called *Golden Mrs. Rundle*, and is, as the name implies, a golden sport from the well-known and fine white variety called Mrs. Rundle, to which it is in all respects similar in build.—*Mr. A. Mongredien: R.H.S., Nov.* 12.

CYPRIPEDIUM ROEZLII [F.C.C.].—A fine New Grenadan species, in the way of *C. longifolium*, but differing from it in its lemon-yellow lip, rosy-purple sepals, and deeper coloured rosy petals; the leaves are bold, lorate, 2 in. broad.—*Messrs. Veitch & Sons: R.H.S., Jan.* 21.

DENDROBIUM AINSWORTHII [F.C.C.].—A beautiful hybrid, whose parents are *D. nobile* and *D. heterocarpum*; the growth resembles that of the former, while the form of the flower resembles that of the latter, the sepals and petals being white, and the lip marked with a large central blotch of rich amaranth or claret-purple.—*Dr. Ainsworth: R.H.S., Feb.* 18.

HIPPEASTRUM VITTATUM HARRISONIÆ [F.C.C.].—A free-blooming Amaryllis from Lima; the scapes bear several long-tubed white flowers, which have a double stripe of deep crimson along each segment of the perianth. Exhibited as *H. picturatum.*—*Mr. W. Bull: R.H.S., Feb.* 18.

PLEOCNEMIA LEUZEANA [F.C.C.].—A fine stove fern from the Philippine Islands; it has a short trunk, spreading tripinnate triangular fronds, with deflexed pinnæ, the ultimate divisions oblong, with the sinus recurved, giving the surface a crispy appearance.—*Mr. W. Bull: R.H.S., Feb.* 18.

PRIMULA SINENSIS FIMBRIATA CŒRULEA [F.C.C.].—A very distinct variety, having pale, violet-coloured, well-fringed flowers; and making an advance towards a blue Chinese Primrose.—*Messrs. W. & A. Brown: R.H.S., Dec.* 3.

PRIMULA SINENSIS FLORE-PLENO MAGNIFICA [F.C.C.].—A vigorous-growing, free-blooming variety, the flowers opening nearly white, and changing to blush with age, and also becoming slightly flaked with carmine; flower-stalks red.—*Mr. J. Tomkins: R.H.S., Nov.* 12.

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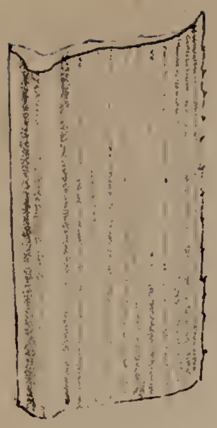

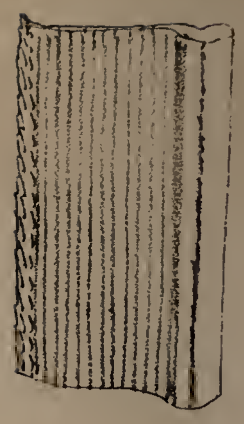

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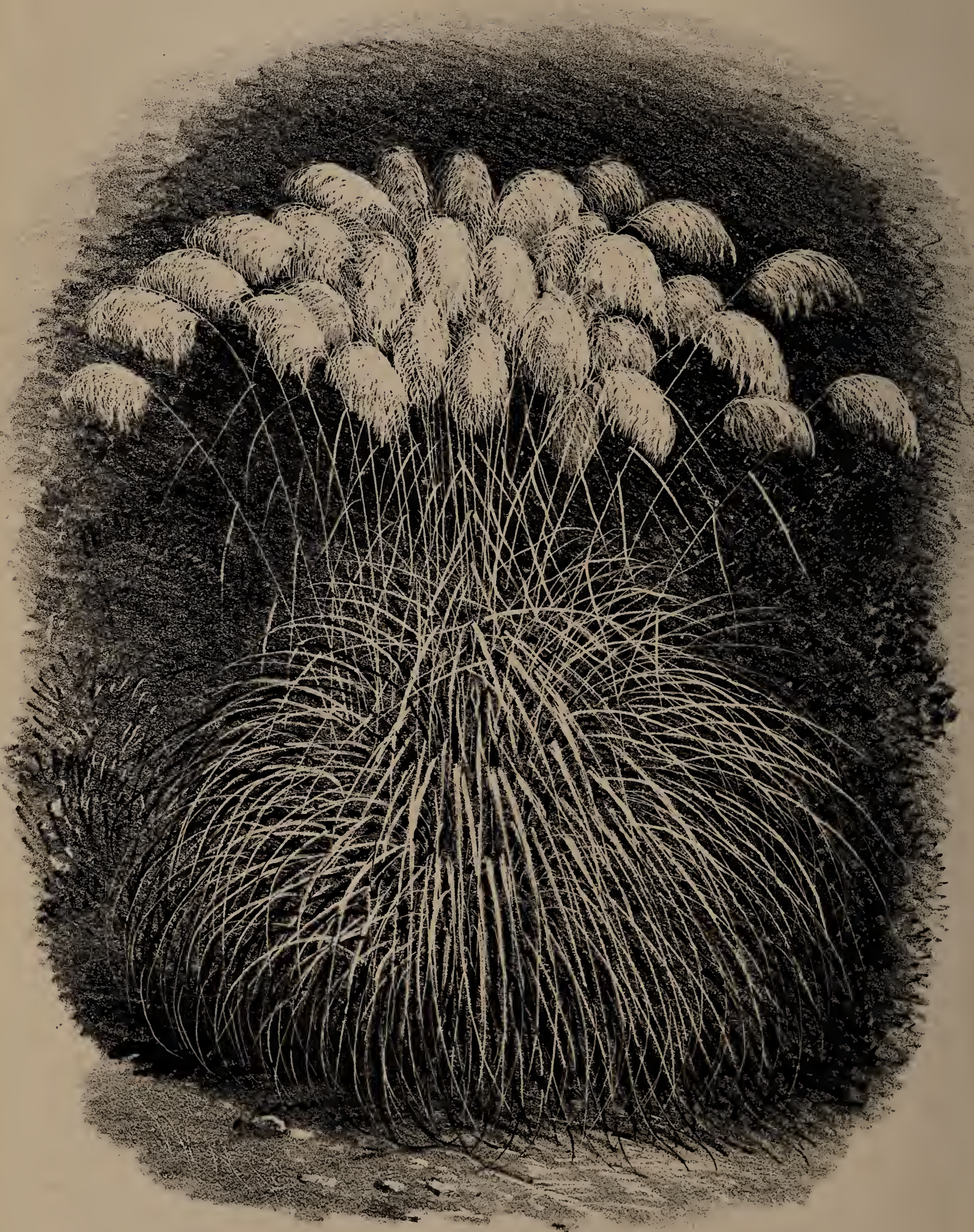


Arundo conspicua.

Primula sinensis Prince Arthur [f.c.c.].—A good semi-double reddish-carmine-coloured variety; very bright in hue, and effective.—*Mr. F. Perkins: R.H.S., Feb.* 18.

Primula vulgaris violacea [f.c.c.].—A charming variety of the common Primrose, with bold, well-formed, deep violet flowers, having a finely contrasted yellow eye.—*Mr. R. Dean: R.H.S., Feb.* 18.

Rapatea pandanoides [f.c.c.].—A very curious and distinct stove plant from the Amazons, having a flattened spirally-twisted stem, spiny-stalked oblong lanceolate leaves, which are flattened and equitant at the base; the young leaves are said to be strongly tinted with crimson; the flowers are in sub-spherical heads, surrounded by two spathaceous bracts.—*Mr. W. Bull: R.H.S., Feb.* 18.

Retinospora obtusa aurea gracilis [f.c.c.].—A very handsome golden variety, the branches being quite lighted up with an auriferous sheen; quite hardy.—*Messrs. Veitch & Sons: R.H.S., Dec.* 3.

Toxicophlœa spectabilis [f.c.c.].—A greenhouse evergreen Cape plant, with opposite oblong glaucous-tinted leaves, in the axils of which are produced the clusters of white Ixora-like flowers.—*Messrs. Veitch & Sons: R.H.S., Feb.* 18.

## ARUNDO CONSPICUA.

WITH AN ILLUSTRATION.

We are somewhat surprised that this most beautiful of Grasses, the Toe-toe of New Zealand, is not met with more frequently in gardens, for not even the far-famed Pampas grass *(Gynerium argenteum)*, grand and massive though it be, can at all compare with it for elegance of character. It is, moreover, quite as hardy as the Pampas: at least, we notice it to be so in the sandy soil of Surrey, our plate being in fact prepared from a photograph of a plant which has stood out uninjured for years in the garden of G. F. Wilson, Esq., of Weybridge, and which flowers annually in great perfection towards the latter end of the summer. Herein lies one of the claims of the *Arundo* to rank above the Pampas as an ornamental plant. The *Arundo* sends up its culms and expands its feathery panicles by the end of July or the beginning of August, so that its graceful beauty can, in the average of seasons, be enjoyed during the succeeding three months; whilst with the *Gynerium*, the inflorescence often only just makes its appearance as bad weather sets in, so that its beautiful plumes are scarcely developed from the leaf-sheaths before they become weather-beaten and disfigured.

The *Arundo conspicua*, or Kakaho, or Toe-toe, is found only in the northern and middle islands of New Zealand, and in Chatham Island. It is the largest of the New Zealand grasses, and grows in dense tussocks, formed of a profusion of long curving leaves, from amongst which rise the erect slender culms, 6 ft. to 8 ft. high, terminating in large drooping panicles of silvery-white flowers, the panicles themselves being from 1 ft. to 2 ft. long. The specimen represented in our illustration was 10 ft. high, and measured 8 ft. across, and at the time when we saw it (August, 1873), had no fewer than forty-two of its slender graceful culms, each bearing a charming panicle of silvery spikelets. Fig. 1 represents a portion of the leaf of the *Arundo;* fig. 2, that of the *Gynerium*, which is more scabrous at the edge.—T. MOORE.

## DATURA FASTUOSA.

ALL the *Daturas* are quaint plants, and many of them are extremely ornamental, growing up into minature trees, often wide-spreading, and sometimes from 8 ft. to 12 ft. high or more. So far as my knowledge goes, their flowers are generally white, or creamy-white, in colour, with a few exceptions, one of which is *Datura Tatula*, of South American origin. *Datura fastuosa*, the subject of these notes, is another kind producing purple flowers—a dull yet pleasing purple hue. It is not only an unusual colour, being purple, but it is also a free and kindly-growing plant. Seeds of it procured, sown in pans, and placed in a moderate artificial heat, early in March, usually germinate in time to form goodly seedling plants for turning out into the open border early in the month of June. Seedling plants thus treated and turned out in an open sunny border, and in a rich open soil, make strong growth and bloom moderately freely in the coming autumn or late summer months. Following this their habit of blooming out-of-doors, they may, when the nights become cooler, be potted-up and removed to a cold frame or the shady parts of a greenhouse until they have somewhat recovered from the check they have received, when, if they are again duly exposed to full light and air, gradually and by degrees they may again come into bloom, and enrich with their peculiar flowers the not abundant display of blossoms of which such structures can boast during the dreary months of winter. —WILLIAM EARLEY, *Valentines.*

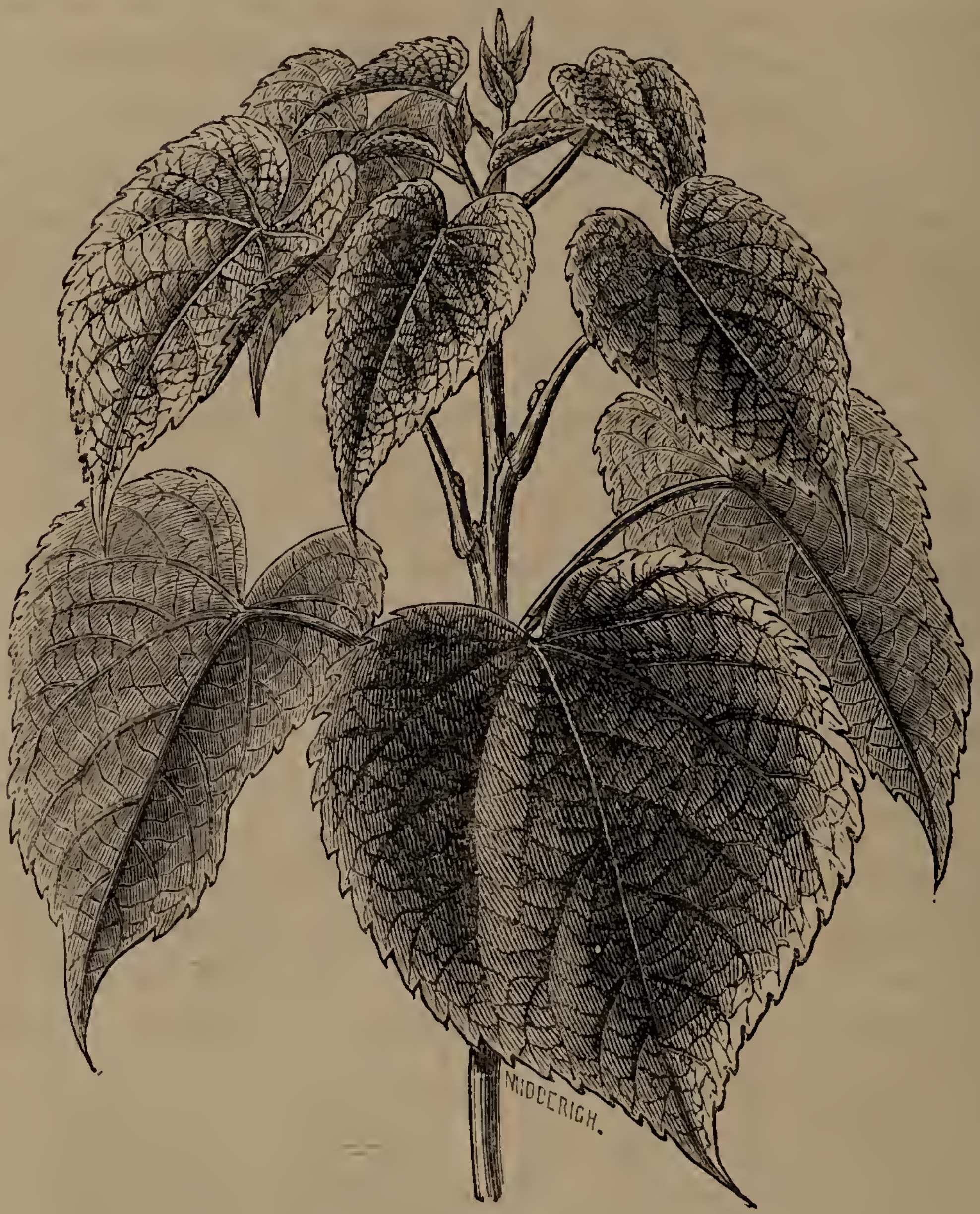
## A CHAPTER ON CELERY-CULTURE.

LANCASHIRE may very well claim to be the head-quarters of the cultivation of this delicious vegetable, and the present peculiarly favourable season shows it off to advantage, for on this, the 6th day of January, we are eating excellent heads of Celery; and as it is cheap, as well as good, it is clear that no extra trouble has been taken with it. The young gardener will do well to note the peculiar circumstances under which this fine crisp Celery is to be had at this time, unprotected. The winter in the Northern counties has been an open one, with little frost, and an immense amount of rain. Now, no winter in my time has ever supplied wet enough for Celery, for its home is in the muddy pool, and peat-water is its native element. In judging Celery for the table, no notice is to be taken of large-sized heads, for they are frequently open-grained and coarse, and yield anything but "solid" Celery, while the flavour is generally in keeping with the rank character of the plant.

All that the most experienced cultivator can expect to accomplish with any plant is to develop and improve its useful, or rather its serviceable parts. Forcing is sometimes spoken of in the case of plants and fruits, but coaxing would be a better word; and although we may appear to have changed the character of a plant by extraordinary treatment, yet it will assert its right very often, "cry back" to the original character, and assume the normal type. Few plants exhibit this more than the Celery, for although it has been picked out of its muddy ditch and placed on dry land, and there compelled to behave itself in an artificial medium, and produce a healthy crop instead of its native poison, still its green tops are unconverted, and are as deadly as ever if taken in large doses, whilst its radical leaf-stalks when blanched are a great luxury. It has not, however, depend upon it, lost its longing for its native element, and when it can get water enough and dung enough, it will do well; but to water Celery at any time as one would water a Rose-plant, would be like "a tub to the whale." I once had the opportunity of watering Celery by having the trenches on a slope, a supply of water running down every trench; and not only did the Celery do well, but the character of the plants seemed altered; they grew chubby, and not so tall as usual, and although complaints were made of their looks, there was no complaint of their flavour. In the same way, we find Watercress, when grown on dry land, quite changed in flavour from the same plant when grown in water; and the *Pontederia crassipes*, which has only a plain foot-stalk when grown on dry land, develops a bladder wherewith to float when grown in water. The Celery that has been grown in a garden has parted with its green colour and with its poisonous character. It is therefore evident that plants whose native habitat is water, behave differently when grown on dry land; the pressure of the two media upon the tissues must necessarily be different. Now if the Watercress had been always grown in dry earth, and some one had just found out that it would be milder in flavour if grown in water, and lose much of its brown colour, or in other words, get blanched more or less, what an improvement this would be upon the bitter herb when it is grown on dry land.

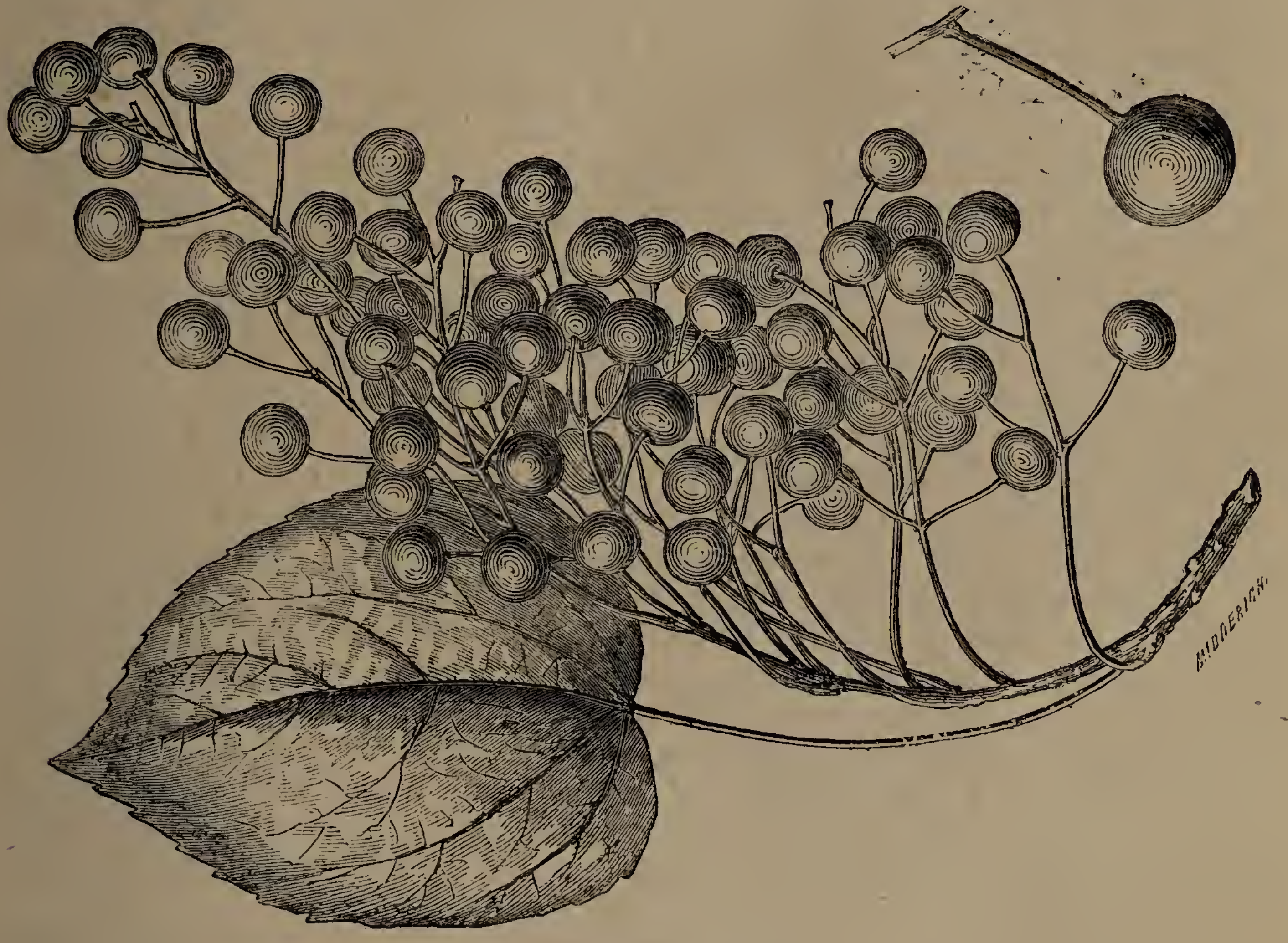
The Celery which I have eaten this winter has been by no means large for Lancashire Celery, but its flavour and its creamy whiteness I have never seen surpassed. Whatever progress Celery makes in dry weather is of an unnatural character, and tending toward the "sticks"; but in hot wet weather the materials are ready to build up the natural tissues. Celery may be drawn (etiolated) just as readily as a Pelargonium, and the eatable portion of the leaves, although long and white, and even crisp, are then sadly deficient in firmness and flavour.

Our scientific men bring forward the case of the *Pontederia* to show that plants and eke animals are creatures of circumstance, and that they adapt themselves to the situation. Now at the collar of the Celery-plant, there is a core with a nutty flavour, and above the collar there are the radical leaf-stalks, blanched and wholesome, in fact, a luxury; but between the collar and the green leaves pass all the juices that make the green leaves deadly and their foot-stalks wholesome. This change in our favour is obtained by skilfully hiding the leaves from the light by degrees; and when this can be done without deranging Nature's plan of still growing the Celery as nearly as possible as an aquatic, the treatment will soon tell upon the plant, and there will be no "sticks," but tender stalks, high-flavoured and hard-hearted. Celery ought to be judged by such points as these, and not by length and thickness, as is too often done at exhibitions.—Alex. Forsyth, *Salford.*



# IDESIA POLYCARPA.

THIS fine hardy plant comes from Japan, and appears to have been distributed from the Botanic Garden of St. Petersburg. It was exhibited in 1867 at the Paris Exhibition, by M. Linden, as a fruit-tree from Japan, and was afterwards put into commerce under the names of *Polycarpa Maximowiczii* and *Flacourtia japonica.* The generic name *Idesia* was given to it by Maximowicz, and is now adopted by all botanists. Our figure, originally published in the *Revue Horticole* (1872, 174), is drawn from a specimen bearing only ripe fruits, sent by Maximowicz to the Paris Museum, and which was described as coming from a cultivated tree, 40 ft. high, growing on the island of Niphon, in the neighbourhood of Mt. Fusi, while other specimens, probably wild, bearing only male flowers, were from the forests of Kinosau, in the island of Kiusiu. Whether or not it is likely to become a useful fruit-bearing tree may be questioned, but there can be no doubt it is a fine ornamental plant, and thoroughly hardy. Its trunk is said to be straight and robust, its branches spreading, and its leaves caducous. The latter are alternate, cordiform, acuminate, deeply toothed, having cylindrical red petioles, 8 in. to 12 in. long, and bearing at some distance from the base two stout projecting glands, two, or often three, others occurring at the point of insertion of the limb, which is thin, soft, 10 in. long, 8 in. broad, of a glaucous-green, whitish beneath, with reddish venation. The flowers are diœcious and apetalous, while the fruits are bacciform, about the size of a large pea, fleshy, of a fawn-red, or reddish-orange colour.



Fruit of Idesia polycarpa.

This species, M. Carrière observes, present a rather rare peculiarity in its growth, which is also met with in *Magnolia grandiflora*, namely, the development of a lower bud, which takes much larger proportions than the others, and tends to widen the head, to the damage of the central axis. Hence, if the plants are wished to grow up, pruning will be necessary. It prefers warm calcareo-siliceous soils, and is found to propagate freely by means of root-cuttings.—T. Moore.

## THE POTATO DISEASE.

NOTWITHSTANDING the incredulity of certain unbelievers, there can now be no reasonable doubt that the Potato Disease—which in some seasons commits such havoc on our crops, and from which they are seldom quite free—is caused by the attacks of a parasitic fungus, as was indeed pointed out many years ago by the Rev. M. J. Berkeley. The scientific name of this fungus is *Botrytis infestans,* or according to a more modern nomenclature, *Peronospora infestans.* This is found to attack the leaves of the Potato-plant during hot moist summer weather, spreading more or less rapidly over it, and in some way or other finding its way to the tubers, those which are infected by it soon becoming putrescent. The *Peronospora*, like other fungi, is propagated by means of spores, which are minute reproductive germs taking the place of seeds. These spores are of three kinds, called bud-spores, moving-spores, and resting-spores, the two former being regarded as somewhat analogous to the buds, and the latter to the seeds, of a flowering plant. The resting-spore is so called because it does not grow till some time after it is formed; and when it does grow, it does not, like the others, produce the mycelium or spawn, but bears new bud-spores and moving-spores, from either of which the spawn may be developed.

The exact mode in which these different kinds of spores act in the propagation of the Potato Disease is not positively known. The observations of Mr. J. M. Barnes, of Levens, tend to show that the attack is to be traced back to the germination of the resting-spores, which takes place as soon as the ground becomes sufficiently heated, usually about the middle of July, and from these the bud-spores and moving-spores are soon evolved.

After many years' observation, Mr. Barnes finds that in old gardens the fungus is always first met with on leaves lying flat upon the ground, and from these as centres of infection it spreads rapidly to the plants round about. In this way arises the patched appearance which is presented by a plot of Potatos for a short time after being attacked by the disease. In the case of new ground, where the patched look is seldom or never seen, he concludes that the spores are brought by the winds, and scattered indiscriminately over the whole crop. "A few days after the germination of the spores, the fungus arrives at maturity, and the bud-spores, set free from the filaments, float in immense multitudes through the atmosphere, or are washed down by the rains till they reach a spot on which they can undergo development. Wherever they settle, on leaf, stem, or tuber, they commence at once to germinate, and the infection spreads more or less rapidly, according to the humidity of the season. Without rain it makes but slow progress in the haulm, and does not reach the tubers at all; while, on the other hand, the more rain there is during the time the fungus is active, the more is the crop affected."

The assumption that the disease is communicated to the tuber by the mycelium descending through the interior of the stem has, in Mr. Barnes' opinion, done more than anything else to blind people as to the remedy for the evil. If this were the case, there would be some moderate degree of regularity in the way in which its effects presented themselves there, and its track through the Potato would be permanently marked. But there is not the slightest regularity as to the part of the tubers attacked; very frequently they are affected in several places at once, but in these instances no communication can be discovered between the various patches, which do not radiate from the point where the tuber is fastened to the stem, as they would do were the disease to enter that way; besides which, until the disease has made great progress, they are always separated from each other by portions of sound and healthy tuber.

These considerations induced Mr. Barnes, in 1849, to enter upon observations and experiments which at length convinced him that the disease was carried to the tuber by the drip from the leaves. As Potatos are generally grown, every shower of rain carries down the active-spores to the tubers below, and as a natural consequence, they fall a sure prey to the fungus. Hence, he concluded, it is not to the mycelium in the stem, but to the spore-bearing branches outside, that we owe the destruction of our crops, and that if by any means the spores could be kept from reaching the tubers, we should have no disease in them, however virulently it might rage in the stems and leaves; and subsequent experience has entirely confirmed him in this view.

Mr. Barnes' remedy is, it will be evident, that of preventing the drip from the leaves, with the moving-spores it would carry with it, from reaching the roots, and by this means he has succeeded in obtaining crops with from 90 to 95 per cent. of sound tubers. He argues that there is no doubt whatever, were it possible to prevent the slightest taint from the leaves falling on the tubers, that there would not be such a thing known as a diseased Potato. One very successful plan of doing so has been tried, viz., cutting off the haulm immediately the fungus appears; but this, though effectual, interferes too much with the produce.

The mode of planting recommended is as follows:—"Commencing at one side, I make trenches from end to end of the plot to be planted, at distances of 3 ft. 6 in. to 4 ft. 6 in., according to the stem-length of the variety I intend to plant; each trench is 12 in. wide and about 6 in. deep. The manure is now put in, if the ground was not manured in the autumn, which I consider preferable, and two rows of sets are planted, one row close to each side of the trench, thus— . · . · . · The mould that was taken out in forming the trenches is now replaced, and as much more added as will raise the double rows into ridges about 4 in. or 5 in. higher than the intervening furrows. The ridges should be flat-topped, and not more than 14 in. wide, or they will encroach too much on the interspaces, which must be broad enough to allow the stems to be bent down without those from opposite ridges overlapping them. Planted in this way the crop does not require earthing-up. Not later than July 12 the crop must be gone over, and the stems gently but firmly bent down by the hand into the spaces between the rows, and any straggling leaves still lying over the roots should be stripped off at the same time. One man will easily do from half an acre to an acre a day, so that the cost is very trifling, especially as a saving of labour has been effected in planting, &c. The bending-down of the stems, in a proper manner and at a proper time, is very important, as the whole success of the plan depends upon this being effectively done. A slight modification of the plan is necessary in fields where the crops are of great extent, and a good deal of the work is done by the plough.

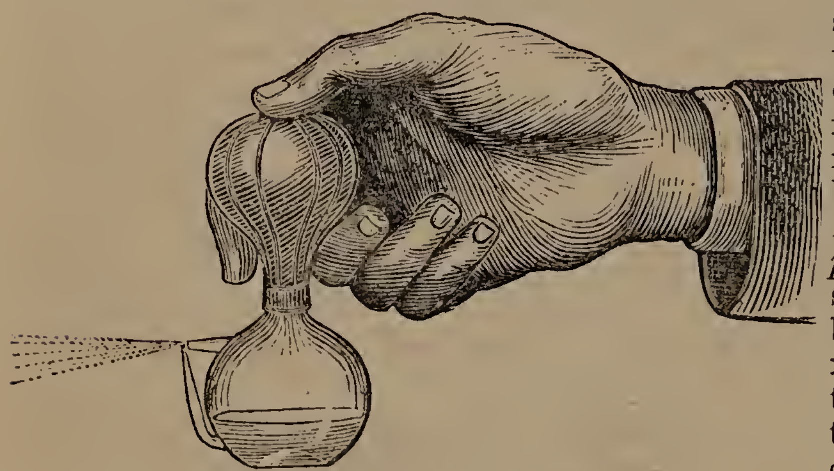
"I have followed this method for twenty-three years, and constantly with the same success, no matter how wet the season might be. My garden is composed of a light open limestone earth, which is one of the worst on which to raise sound Potatos, the spores readily finding their way to the tubers, so that my success is solely due to the method of planting, and the practice of bending down the stems."

## GARDEN GOSSIP.

IN the Report of the Directors of the Chiswick Garden, it is stated that a *Trial of Grapes* will forthwith be instituted there. Many new varieties of the Grape Vine, it is observed, have been introduced to our gardens within the last few years, and it has been thought desirable to devote a house to the growth of these, with a view to a closer observation of their peculiarities and merits. The small curvilinear vinery in which the different sorts of White Muscats had been brought together some years since for a like object, which has been accomplished, has been set apart for this purpose. Such work as this, and the trials of Vegetables and Flowers which are every year made at Chiswick, well befits a Society like the Royal Horticultural, which was founded for the advancement of Horticulture. It is to be wished that circumstances permitted more of this kind of work to be taken in hand, and that the strife and bickerings which have of late been too notorious might be abandoned, and an united and unanimous effort made to put the affairs of the Society on a more secure foundation.

—— At the Wellington Road Nursery, Messrs. E. G. Henderson and Son cultivate a very fine collection of *Double Chinese Primroses*, as well as others. There may be seen the oldest types of doubles in *Alba plena* and *Rubra plena*, which are so far useful that they show at a glance the vast strides that have been made during the past few years in the production of fine double forms. *Alba plena fimbriata* presents a marked advance on the old variety, but the best is *Candidissima*, a very fine fringed double flower, pure white in colour, and a very free bloomer. *Rubra grandiflora* is a fine double form, much superior to the old red. *King of Purples*, a very full double flower, rich in colour and a prodigious grower, is a still greater advance. *Magenta plena*, *Magenta Queen*, *Glen Eyre Gem*, and *Magnifica*, all of which have good quality and substance in their flowers, furnish various shades of carmine-red and magenta-rose. *Blushing Beauty* and *Exquisite* have the white ground charmingly tinted with rose, and are both very beautiful; so also is *Peach Blossom* and *Lilac Queen*, the colours of which are indicated by their designations. *Mrs. Eyre Crabbe* has the perfectly double white flowers, very prettily flaked and spotted with rosy-carmine, and is altogether a superb variety. *Emperor* has remarkably fine flowers of a rich purplish-rose, like *King of Purples;* and *Empress* is a very fine double white, both these latter belonging to the fern-leaved group, in which good double-flowered varieties are as yet scarce. These varieties are highly meritorious, and comprise all the hues of colour and markings yet found in double Primulas.

—— So long as plants continue to have *Insect Enemies*, so long must the cultivators seek for means to destroy them. The chief remedies resorted to are fumigation, and careful washing, the latter being effected either with water or some medicated liquid. Sometimes these insect-destroying washes are distributed over the infested plants by means of spray-producing contrivances, most of which involve continuous blowing from the mouth. In *Messrs. Bourne and Taylor's Improved Spray-producer*, we have a real improvement, since all the fatigue of continuous blowing is dispensed with, and the necessary force for the distribution of the liquid is obtained by pressure of the thumb on an india-rubber pouch, connected with the glass containing the liquid. The accompanying illustration will be understood at once. This contrivance was primarily introduced for use in the sick-room, as a distributor of perfume or disinfectants, but the greater ease of using it will especially recommend it to amateurs for garden use, in those cases where a liquid insecticide has to be distributed over infested plants. These little instruments are to be obtained of the makers, Castle Street, Holborn, London.


IMPROVED SPRAY-PRODUCER.

—— By substituting willow for thorn, *Hedges can be made profitable;* they are, it is said, more effective as a shelter, quite as strong, reared in a much shorter time, and at less than half the cost. The Willow has been recommended for hedges by Linnæus, Loudon, Miller, and other writers of note; and the only way in which the neglect of such advice can be accounted for is simply that the matter has never been sufficiently brought under notice. A willow hedge, 200 yards long, planted in ground well dug over, cleaned, and manured—planted with cuttings 12 in. long and 6 in. apart, requiring 1,200 cuttings, value about 25s.—became in two years a good strong hedge, capable of resisting any pressure an ordinary hedge would be subject to. The willows being crossed diagonally, rendered it almost impossible for anything to break through. The dressings or spray of the first two years were coarse and worthless, but in the three succeeding years the dressing has sold to basket-makers for 20s. each year, which has paid the entire cost of planting, labour, and rent of land which the hedge occupies. Another hedge planted upon the same principle has, at the second year's dressing, paid the cost of the plants. The above hedges were planted with the Bitter Willow, which neither cattle, game, nor vermin will often materially injure.

—— The Egyptian Yarrow, *Achillea ægyptiaca*, is quite equal to any related plant in the beauty of its clear yellow flowers, while it has something of the grace of an elegant fern in its silvery finely-cut leaves. It is a native of Egypt and Greece, and though not hardy in all soils and positions, is quite so in sheltered borders. It is very suitable for rockwork, planted in light loam mixed with brick rubbish, in which it would grow compactly and survive many years, while on chalky or dry warm banks it would probably prove thoroughly hardy. When grown as a bedding-plant, it is best kept over the winter in frames; and if the flowers are pinched-off, it forms a dense mass of elegantly-cut, silvery, fern-like leaves.

—— Those who value their Asparagus beds, should read Mr. Earley's little handbook, *How to Grow Asparagus* (Bradbury and Co.). The chapters on soil and situation, and on the formation and planting of the beds, give briefly but clearly all the information necessary for out-door culture, while chapters are added on the subject of forcing, and on a special mode of culture, "where produce of the finest possible character is the aim of the grower." As a practical trustworthy guide, this little brochure may be strongly recommended to those who desire to grow Asparagus as it should be grown.

—— The following mode of *Planting Specimen Conifers* has been recommended:—When it is determined where a permanent specimen is to be placed, the ordinary trees of the plantation are cleared away, the ground is trenched 20 in. deep, and formed into an elevated circular platform one foot higher than the surrounding surface, with a slight rim a little elevated to prevent the rain which falls on the surface from running off, and in diameter according to the vigour or nature of the kind to be planted. A platform 6 ft. across is sufficient at first for the moderate-growing kinds, but for the more vigorous and robust-growing kinds a table of at least 10 ft. is requisite, leaving the trench open round the outside to receive the fallen leaves. Afterwards, as the roots are found to reach the outside, which generally takes place in from two to three years, another addition is made of from 3 ft. to 4 ft. all round. Thus treated most of the trees planted at Leighton Buzzard, in the arboretum of J. D. Bassett, Esq., by Mr. Mannock, have made extraordinary growths.

—— In the growth of the *Gladiolus*, it is often found that when two flower-stems grow up from one corm, the spikes are not so fine as when a single one comes from a smaller corm. Aware of this fact, Mr. Tillery tells us, that having last year some strong corms of the variety named Shakespeare, with two eyes in each, he cut the corms through the centre, and planted them with a little sand round each, and they not only flowered well, but produced good corms for the present year's planting. This experiment, therefore, seems, in his case, to have answered the purpose.

—— Those who are fond of *Anœctochili* may be glad to know that they have been successfully cultured at Kew under bell-glasses, one-half of which is green, the other half white—the green-coloured portion of the glass affording the necessary shade, while through the transparent portion the beauties of the plants can be seen. This mode of treatment has proved extremely satisfactory.

—— Under the title of *The Potato Disease and its Prevention* (Houlston and Sons), Mr. Dimmick, nurseryman, of Ryde, gives us a very good general treatise on Potato-culture. In the author's opinion, "the primary cause of the disease is a weakened constitution, and not a parasite," in which conclusion we cannot agree with him. Many useful hints may, however, be gleaned from the other portions of the book devoted to details of cultivation, the two main points of which may be thus stated,—Take care of the seed-tubers, and Plant early in spring.

—— The *Salvia gesneræflora* figured in the *Florist* for 1851, though now rarely seen, is one of the finest of decorative plants for the conservatory during the winter and early spring months. It was raised at Syon, from Columbian seeds, and large bushes of it, more than 3 ft. high, were grown in that establishment, and were a blaze of scarlet from November till April. As a species it is allied to S. fulgens (cardinalis); but S. gesneræflora flowers through the autumn and winter, and holds its flowers well, while S. fulgens is a summer species, and the blossoms soon fall. It is one of the very best of the Salvias for decorative purposes during the winter period.

—— No planter should forget *Zenobia speciosa*, better known perhaps as *Andromeda speciosa,* whose flowers grow in clusters, and are of the same shape as those of the Lily of the Valley, but much larger, and of the purest transparent waxy-white. There are several varieties, differing in the shape of the leaves, and in the size of the flowers. One variety, called *pulverulenta,* from the glaucous under-surface of the leaves, perhaps surpasses the others in beauty.

## GARDEN WORK FOR MARCH.

### FLOWERS.

OWING to the geniality of the winter, many of the spring-flowering plants are in an advanced state, amongst them fragrant *Violets* in abundance, *The Czar* and *Single Russian* being the earliest. Frequently examine, and cautiously and gradually reduce protecting materials used for covering such plants as *Cannas*, *Arundos*, *Melianthus*, &c. *Ornamental Shrubs* upon lawns should now be pruned, so as to regulate their growth, whilst standards and plants of formal habit must have their proportions scrupulously preserved. *Roses* may now be pruned; the vigorous growers should be left a foot or so in length, while moderate growers may be cut in close. Finish digging flower borders, and frequently stir the surface of the ground amongst spring-flowering plants, making good any vacancies. Lay *Box-edging*, and turn and surface-dress walks with fresh gravel. Edge grass-verges; push forward ground-work arrears of every description; sweep and roll grass preparatory to mowing. Plant out *Carnations*, *Hollyhocks*, *Pinks*, and *Pansies* in beds or borders with prepared soil. *Gladiolus* may also be planted, not allowing manure to come in contact with the corms, since it is apt to generate decay. *Annuals* may be got in towards the end of the month, if the weather is favourable; nothing is gained by sowing too early. Sow *Sweet Peas* and *Mignonette* at intervals.

IN-DOORS.—All soft-wooded stove-plants which make root freely should be potted on, before the roots become matted in the pots, for when they are allowed to become entangled, much injury is inflicted and time lost in unloosing them. Winter-flowering plants, such as *Justicias*, *Eranthemums*, *Euphorbias*, &c., should have attention, and be started into growth. *Thyrsacanthus rutilans* is one of the most graceful of this group. *Aphelandra aurantiaca Roezlii*, which is so bright and effective in winter, makes the finest plants from seed sown annually. The charming *Scutellaria Mocciniana* is so free and effective, that cuttings rooted now, will produce its brilliant flowers within three months. Specimen plants of *Allamandas*, potted early, will now be growing freely, and should for the present be allowed to ramble somewhat at will, merely stopping and regulating over-gross shoots; they always flower more freely when stopped regularly at a more advanced stage, and tied down. Successional batches of *Achimenes* and other dried tuberous roots may be started. Advance the temperature with the lengthening of the days, and allow a proportionate degree of humidity. Admit air cautiously, and chiefly at the top of the houses. Towards the end of the month, a slight shading must be provided for stoves during bright sunshine.

Conservatories must be kept gay with successional batches of flowering plants, and the duration of these may be prolonged by shading and maintaining a mild, healthy temperature, and keeping everything scrupulously clean. Introduce a good supply of *Roses* into the forcing-house; they force freely from this time in a temperature of 55° to 60°. *Daphne indica rubra* and *alba*, so much prized for their scent, grow most freely in a fresh friable loam, to which may be added one-third of leaf-soil. Winter-flowering *Eupatoriums* and *Libonias* should be cut back, and propagated from young wood. *Cinerarias* and *Primulas* must be shifted for late flowering, and more seed sown for a supply of early-blooming plants. *Cyclamens* that were sown in autumn must be shifted, and grown on in a temperature of about 50° to 55°. *Camellias* that are planted out must be watered freely at the root, and such as are thoroughly established will derive benefit from applications of liquid manure.

Push forward the propagation of *Bedding-plants*, and pot off *Pelargoniums* and such as are rooted. Many of the fibrous-rooted plants do best in shallow, handy-sized boxes, into which they may be planted from the cutting-pots. The variegated varieties of *Pelargoniums* will now root freely from cuttings. Sow seeds of *Amaranthus*, *Perilla*, &c. Start *Dahlia-roots* in a brisk heat. Plant out *Calceolarias* at 6 in. apart in cold frames or turf-pits ; towards the end of the month they may be planted in trenches in light soil. Divide *Violas*, and start them in frames.—G. WESTLAND, *Witley Court.*

## FRUITS.

*Peaches and Nectarines :* Water the inside border of the early house if the crop is swelling ; thin the fruit, but be careful to leave sufficient to allow for *dropping* during the process of stoning. Attend to previous directions in regard to temperature, but toward the end of the month, as heat and light increase, the temperature may range a little higher, especially during sunshine ; use the syringe at closing-time, and fumigate whenever green-fly appears.

*Cherries and Plums :* Use the syringe to keep up the necessary moisture till the trees come into flower ; at that time the atmosphere must be less humid, and abundance of air must be admitted ; give a night temperature of 60°, rising from 10° to 15° through the day, during sun-heat. *Plums* will require plenty of water at the root if growing in pots.

*Strawberries :* The plants should be liberally supplied with liquid manure during the time the fruit is swelling ; be careful at this stage not to let the plants suffer at any time from drought ; use the syringe to keep the foliage clean and healthy. Give plenty of air to those in flower, and place more plants inside for succession. If the stock of plants in pots be limited, it is a very good plan to lift some strong *young plants* from the open ground, with balls of earth, slip them into pots, and place them under glass at once ; they usually produce a good crop.

*Melons :* Attend to the linings of those in frames by adding fresh stable-litter, and turning the whole together, so that a top-heat of about 70° be maintained. Pinch out the points of the leading shoots as soon as they begin to spread ; earth-up and water sparingly. Plant out those sown last month, and sow again.

*Pines :* Keep up a moist atmosphere in the case of those to which fire-heat is applied, and give the fruiting plants a good soaking of water so soon as the fruit-spike is visible ; all other plants that are dry will also require water. Such of the succession plants as require a shift and were not potted last month, should be seen to at once ; use free turfy loam, mixed with a fourth-part rotten manure ; turn or renew the beds before replacing the plants ; keep them a little close till they begin to grow, when more air should be given.

*Vines :* Muscats require a high temperature, with air when in flower, to ensure their setting properly. The temperature in the succession-houses may range a little higher, now that we have more solar heat and light ; from 65° to 70° is a good average night temperature. Keep up a moist heat in the early house till the fruit begins to colour. See last month's directions for Vines in pots ; those intended for fruiting next season should now have every attention, and the pots should be kept plunged in bottom-heat, if possible.

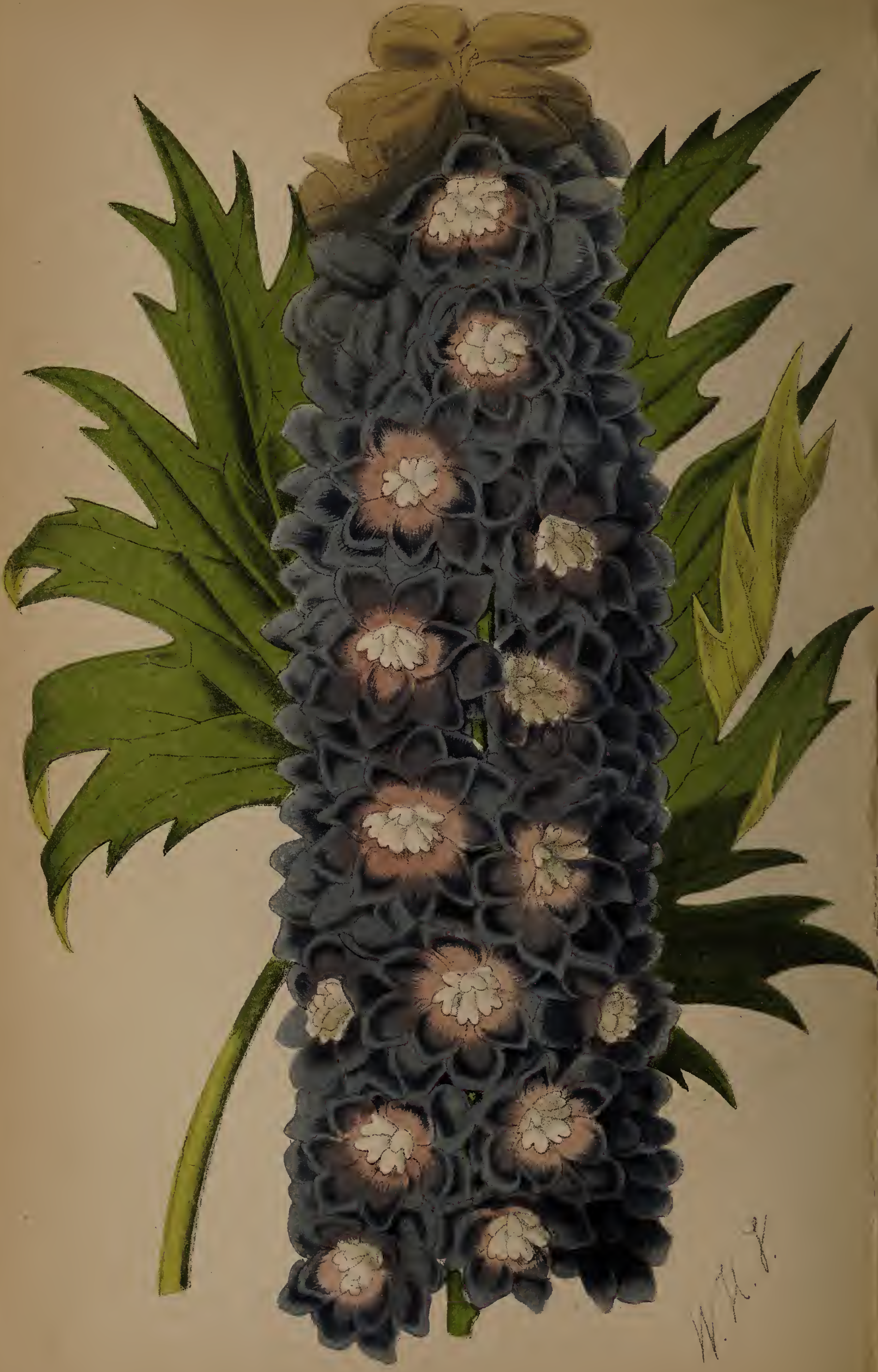
*Hardy Fruit:* The seasonable check of last month has fortunately kept these in their place. *Apricots* and *Peaches* were getting too forward; these should be protected, and if no better material be at hand, spruce fir branches may be used with advantage, removing them occasionally in the day-time, when the trees are in blossom. Bring all pruning, nailing, planting, &c., to a close as speedily as possible. *Filberts* should be pruned as soon as the blossoms are visible, cutting back all small shoots that do not show fruit, and keeping the main branches thin. Plant *Strawberries*, and use the hoe among the plants in the fruiting beds. *Orchard-houses* will be benefited by plenty of air, but it is necessary to be sparing of moisture at night during the time the trees are in flower, for dampness coincident with a low temperature is most injurious to the blossoms.—J. Powell, *Frogmore.*

## VEGETABLES.

With the advent of March commences the most busy season of the year, in so far as the kitchen garden is concerned. All digging and trenching operations should have been completed, and the final preparation of the ground should engage a large share of attention. Heavy, rough, tenacious soils, where they have been thoughtfully laid up in ridges, should be levelled and knocked about, with the view of modifying in some degree their excessive harshness; fine dry weather must be chosen for doing this, as to attempt it when they are moist will but increase the evil. Many kinds of seeds must now be sown for the more permanent crops. It is judicious to get in seeds earlier on light, stony, well-drained soils than upon such as are cold and clammy. Sow small seeds, such as the following:—*Cabbage* (early, and red for pickling), *Broccoli* (Walcheren and Snow's), and *Lettuce* on warm, sheltered aspects; and in warm situations transplant a few of the forwardest autumn-sown *Lettuces* out of the seed-beds on to a favourable site. Sow also *Cress* (American and Australian), *Chervil*, *Carrots*, *Parsnips*, *Onions* (silver-skinned), and get in successional crops of *Broad Beans*, *Peas* of the mid-season kinds, &c. *Cardoons* should also be sown in pans or boxes, where this vegetable is esteemed, and an early supply is in demand. Prick out the early spring-sown *Celery* on to a warm bed under shelter. Pot-off *Tomatos* into small-sized pots, to prepare them for final planting-out so soon as safety from frosts is enjoyed. Make a main and final planting of *Potatos*, of early sorts, intended as such, to precede the main crops in the field.

Remove the covering off *Seakale* plantations immediately the crop has been taken, to obviate their being drawn prematurely into growth the second time. Earth-up the early sowings of *Peas* and *Broad Beans*, so soon as they are well through the ground, or require this aid in a secondary stage. The spring dressing of *Asparagus* plantations should be carried out forthwith, with good decomposed manure, if not already done. All prepared and blanched *Celery*, which exhibit a tendency to run, should be taken up forthwith and lain in by the heels; the check thus given will tend to deter too sudden growth. Transplant *Cabbages* from the autumn-sown beds, and attend to the earthing-up of such as need it.

Add fresh soil to the roots of *Cucumbers* as they advance in growth; and give an occasional watering in instances where a goodly growth is being made. Sow *Cucumber-seeds* for a successional crop; and particularly attend to providing a supply of heating material in cases where fermentive materials alone are employed to maintain the necessary heat. In all instances where proper heating media exist, it will now be advisable to add a few degrees' more heat both by night and day. An advance of 8° by day and 4° to 5° by night, with as much more fresh air allowed as will enable them to grow strongly, will conduce to their abundant prolificacy besides.—William Earley, *Valentines.*



DELPHINIUM KETELEERII

## DELPHINIUM KETELEERII.

WITH AN ILLUSTRATION.

FOR the specimen of this fine hardy perennial Larkspur represented in the accompanying plate, we are indebted to Mr. A. Waterer, of Knaphill. With him it grows three feet high, having bold deeply seven-parted leaves, ten inches across, with broad inciso-lobate segments; and flowers in dense spikes, nearly a foot long, having several short branches at the base. The blossoms are double, about an inch and a half across, cerulean-blue, the centre and base of the petals tinted with rose, a tuft of small white petals forming a white eye.

This is a very desirable acquisition among the double-flowered hardy *Delphiniums*, which are plants of a remarkably effective character. Of these double sorts we may just mention *Madame Jacatot*, large, soft blue, or amethyst; *Dr. Edwards,* dark blue, a noble spike; *Princess of Wales*, sky-blue, with white centre; *Madame le Bihan*, blue, shading off to pinkish violet. The most brilliant of them all, however, is *D. sinense flore-pleno*, which we were glad to see Mr. Waterer had taken in hand, as the Knaphill soil and situation may probably suit it well. It is perfectly hardy, a true herbaceous perennial, which may be readily increased in the spring, either by division or from cuttings, the latter, taken off when a few inches high, rooting freely. The colour is an intensely bright dazzling metallic blue.

There are also some very fine single-flowered sorts of the type of *D. formosum*, deep blue, with white centre; and a very effective new one, raised by Mr. Ware, called *Cambridge*, of a pale grey-blue, with black centre, which is distinct in character, and really attractive.—T. M.

## AQUATICS.—CHAPTER XIII.

IN the *Limnocharis Humboldtii* we have a very beautiful tender or stove Aquatic which has the great recommendation that it is evergreen; the foliage is of the brightest green, with the veins running longitudinally through the broadly-oval blade, which is generally from 2 in. to 3 in. long, and from 1½ in. to 2 in. broad. The leaves float upon the surface, and to this end the mid-rib is very much thickened on the under-side, and appears filled with a network of air-cells. The leaf-stalks are usually about 6 in. or 8 in. long, but if the plant is placed in deeper water, their length will be increased accordingly. In its flowering this plant is remarkable, as it continues to blossom abundantly through most of the summer months; the individual flowers, it is true, do but last one day, but to make up for this there is always a numerous succession on the morrow. The flowers are tripetalous, of a beautiful yellow colour, having a transparent delicacy about them which it is difficult to describe; they bear some resemblance to those of the lovely *Calochortus luteus*, but as many may not have seen this flower, I will name one other which everybody must have seen, viz., the *Eschscholtzia californica*, to which it has a marked likeness. The purple fringe of brown barren stamens which surrounds the fertile ones is most lovely.

A tank or pan one foot deep will be sufficient for the plant, which may either be planted out, or kept in a pot, if the surface of the soil is kept 6 in. below the water. It is of no use attempting to grow it in a greenhouse temperature, except during the heat of the summer. It has been found by Humboldt in the marshes west of Caraccas, in British Guiana, &c. The plant increases very rapidly by suckers.—W. BUCKLEY, *Tooting.*

## HARDY HIGH-COLOURED RHODODENDRONS.

THOUGH the *Rhododendron* may now be considered capable of bearing all the vicissitudes of our climate, yet increased hardiness of constitution is a point which may well be constantly aimed at; for experience has shown that varieties in which the blood of *R. ponticum* is freely mingled, suffer in extreme winters from the destruction or deterioration of their dormant blossoms, though the plants themselves, so far as regards their vegetative organs, are quite uninjured; while among the high-coloured sorts, where the blood of *R. arboreum* is present, even though filtered down by subsequent crosses with hardy kinds, there is a degree of tenderness both in leaf and flower which leaves little chance of a fine bloom after a moderately severe winter.

Hence the importance of selecting for breeding purposes a hardier race than either of the species just referred to; and such a race is fortunately at hand in the varieties of the North American *R. catawbiense*—varieties which suffer scarcely at all in their flower-buds, even from severe winter frosts, and which, moreover, have the immense superiority of carrying broad, bold, enduring foliage, such as not only sets off the flowers to better advantage, but during the greater portion of the year, when they are not in bloom, marks out the plants as evergreen shrubs of the first order. We have seen these *catawbiense* varieties with the buds fresh and full of life, while those of varieties bred from *ponticum*, when cut across, showed many of the embryo flowers blackened and lifeless, and those with appreciable *arboreum* blood were hopelessly destroyed.

Fortunately for the American garden, there are some sorts which seem able to withstand the utmost severity of our winters—for example, the variety called *R. roseum elegans*, one of the early removes from the typical *R. catawbiense*, and which is unquestionably the best of all Rhododendrons for growing on into the tree form, since, under fit conditions, it always maintains a densely leafy head, and is annually smothered with perfectly-developed trusses of its delicate rosy blossoms. The following half-dozen sorts rank amongst modern varieties of the highest excellence both as to leaf and flower, and appear to be unaffected by the weather, as we have seen them uninjured after the severest winters, namely:—

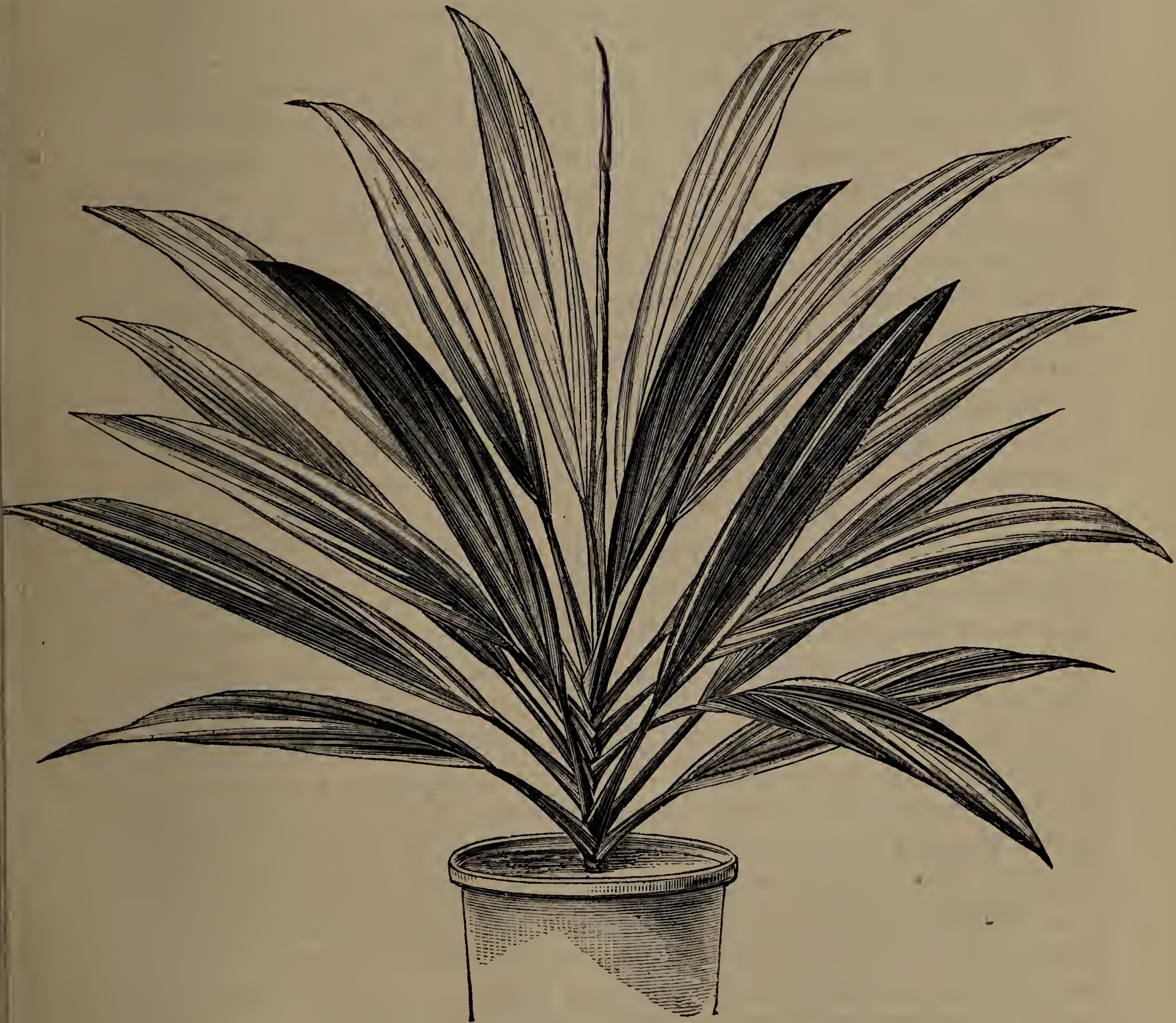
EDWARD S. RAND: Immense trusses of splendid crimson flowers, combined with fine catawbiense habit.

JAMES BATEMAN: Flowers of a clear rosy-scarlet, of the most perfect shape; the habit excellent.

MRS. MILNER: Flowers rich crimson, of first-rate quality; habit of growth and foliage very fine.

H. W. SARGENT : Enormous trusses of crimson flowers, with fine catawbiense habit; a magnificent hardy variety.
OLD PORT : Rich and very deep plum-colour, fine habit; distinct and good.
CARACTACUS : Splendid trusses of purplish-crimson flowers; habit and foliage first-rate.

These are a few that may be depended on, not only as giving the highest quality of flower, but boldness of habit and foliage, and extreme hardiness. Sorts like these should be planted in masses of one colour, not dotted as single specimens, and would then be richly effective.—T. MOORE.



## DRACÆNA AMABILIS.

FEW amongst our ordinary decorative plants can compare with the coloured-leaved *Dracænas* of the *ferrea* and *terminalis* types, a group of ornamental plants which has been very greatly augmented by the acquisition of new forms from the Pacific Islands, and by home efforts at intercrossing. The rich deep bronzy tints of their foliage, lit up, as it is, here and there, by flashes of red or rose-colour of a more or less brilliant hue, is so unlike that of most other plants, that they never seem to come amiss in the composition of pictures of decorative effect, the variation in form and habit being also remarkable, and adding greatly to their utility. The advent of the forms with white variegation furnished additional materials of much value from the ornamental point of view; and now subsequently, the blending of the rosy and white tints on the same plants, leaves little to be desired.

It is to this last group that *D. amabilis*, the subject of the accompanying woodcut—which has been kindly lent to us by Messrs. Veitch and Sons—belongs; and it is one of the most distinct and handsome which has yet been obtained. It is of robust habit, the leaves, which are of a narrow linear lance-shaped figure, averaging from 2 ft. to 2½ ft. in length, and from 4 in. to 5 in. in breadth. It is, however, as the Messrs. Veitch observe, from the character of its variegations that it will form so fine an addition to this splendid group of decorative plants. The ground-colour of the leaf is of a bright glossy green, which, as the plant grows, becomes marked and suffused with pink and creamy-white, the young leaves in large specimens being quite rosy—a charming combination of colouring, attractive not less for its intrinsic beauty, than for its distinctness and novelty. As a test of the merit of the plant, it may be mentioned that it has been freely certificated in England, and it has also been awarded the first prize, as the best new foliage-plant in the show, at the recent International Exhibition in Ghent.—T. MOORE.

## THE COLORADO POTATO BEETLE.

THE natural home of the Colorado Potato Beetle, *Doryphora decemlineata*, [for figure of which see p. 42] is the Rocky Mountains, where it feeds upon various species of *Solanum*, principally the wild *S. cornutum*. In other parts of the States, it feeds on *S. rostratum*, and is especially partial to *S. carolinense*. When, however, the settlers planted the Potato (*S. tuberosum*), the *Doryphora* attacked it greedily, and, rapidly increasing, in a comparatively few years spread over nearly the whole width of the continent. It has been seen in New York and Pennsylvania, and although it has perhaps scarcely yet gained a footing in the Atlantic States, that is probably only a matter of time; and when it happens, there is only too much reason to fear that the beetle may find its way across the Atlantic to the rich feeding-grounds of Ireland and England. This enemy is all the more to be dreaded because it propagates itself with amazing rapidity, three broods following each other in quick succession during the growing season of the potato.

The *Doryphora* hibernates in the perfect state, and in the early days of spring, if the weather is moist and warm, it is seen sailing through the air in search of its food-plant. As soon as the potato is through the ground the female commences to deposit her eggs on the under-side of the leaves, each female producing in round numbers about 1,000 eggs. In a few days the larvæ appear and begin their work of destruction, which they continue for about three weeks, when they retire beneath the ground and pass through the pupa stage, to appear again in a fortnight as perfect insects, and soon multiply their species a thousandfold. How long the parent beetles exist we have no authentic information, but we think it may be assumed that having accomplished the act of reproduction, they speedily die; but at any rate there is little doubt that the members of the last brood of the season having reached the perfect state, hibernate in the soil, and possess the ability to penetrate to such depths that frost and ploughing have little or no effect upon them, specimens having been found eight and ten feet below the surface, though the more general distance is from 18 in. to 2 ft., while some do not enter the ground at all, but secrete themselves beneath suitable substances in favourable localities. The worst of the matter is, that when once the beetle obtains a footing in any locality, there it will probably remain for all time; for it travels by spreading, not by migrating from one district to another; and although in some seasons it may be less disastrous in its operations than in others, it will always be ready to take advantage of favourable opportunities.

It may be asked in what state the beetle may be expected to arrive, and by what means it may be distinguished. The answer to the first part of the question may be surmised from the brief life-history above given, for it does not appear possible that the insect can reach this country save in the perfect state. The advice has been tendered that those seedsmen who import American tubers should be careful to see that they do not also import the *Doryphora;* but it is difficult to see how it should be packed with the seed unless placed there intentionally, and even then it would probably perish, and would invariably be discovered in the warehouses here. It is tolerably certain that it cannot reach this country in the egg state, and as there is ample reason to believe that it never hibernates in the pupa stage, which is, too, of short duration, the only way it can possibly reach this country is by alighting on vessels lying in the ports on the Atlantic coast of America. Stowed away in the hundred and one nooks of the numerous traders between the States and Europe, the beetle would experience little difficulty in surviving the voyage, and as we have shown, one female safely landed would speedily found a colony.

The perfect insect is about half an inch in length, and 5-16ths in breadth, the ground-colour of the elytra being of a creamy-yellow, marked, as the specific name implies, with ten longitudinal black stripes, five on each wing-case, the third and fourth of which unite at the base. It might be doubted whether the *Doryphora* would find our climate suited to its constitution, but the experience of the Americans negatives all hope of that kind, for as a matter of fact, the beetle has spread more rapidly northwards than southwards. In April and the sunnier weeks of spring, it delights in warm and comparative dryness, and if tempted too early from its winter quarters, speedily returns to them, if the weather becomes cold and wet. A hot dry summer, however, is fatal to large numbers of the larvæ and even the perfect beetles, which cannot enter the hard-baked earth, and consequently die. Such summers as those, however, are not the rule here; so that, as far as we can judge with our present knowledge of *Doryphora*, it would probably flourish amazingly in this country. The remedies found most effectual in America are dusting the plants with a mixture of Paris green and flour or plaster, a very small quantity of which will kill any larva or perfect insect with which it comes in contact; but this powder is highly poisonous, and requires to be used with care. The best time for performing the operation is in the cool of the morning, when the dew is still on the leaves and stems. Hand-picking is still resorted to by many, while in hot dry weather it is often found sufficient to knock the insects on to the ground, where the "hills" are sufficiently wide apart to expose the ground between to the sun.

The ravages of the Potato Beetle, though they are spread over a wider territory, are not so extensive as they were a few years ago, for as the beetles multiplied year by year, so their natural enemies increased *pari passu*, and Mr. Riley, the State Entomologist of Missouri, tells us that in 1871 he found in most of the potato patches through which he passed scarcely a larva of *Doryphora* that had not one or more eggs of its deadly parasite *Lydella doryphoræ* firmly attached to it. Altogether he has now ascertained that about 22 insects attack the Potato Beetle in one stage of its development or another; and in 1872, so successful had been the operations of the farmers, aided by its natural enemies, that in Mr. Riley's own locality little damage was done. Toads, crows, and ducks eat both larva and perfect insect, and by a little management, chickens have in some places been induced to acquire a taste for them, while the much-disliked skunk is in many parts unmolested, because he is now known to be an enemy of *Doryphora*.

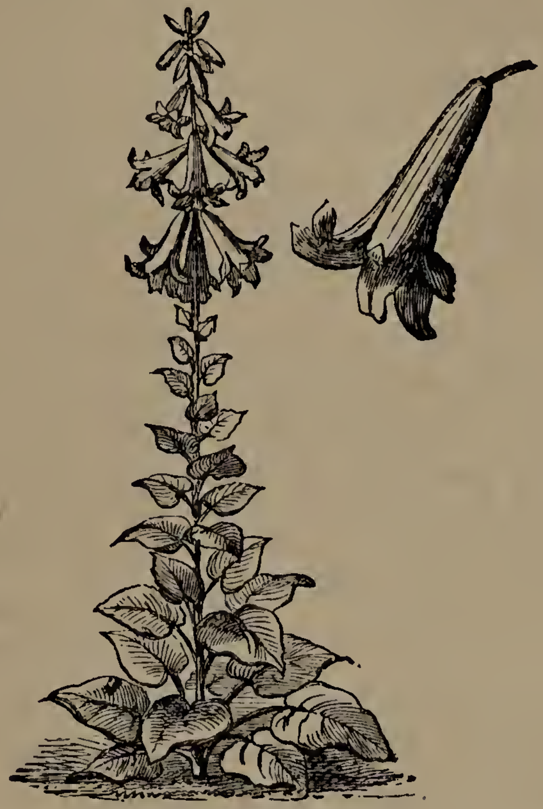
The success which has thus so far attended the efforts of students of natural history to combat a most terrible insect scourge is another proof of the advantages that such knowledge confers upon the agriculturist. It is but one instance out of scores where a little knowledge is not a dangerous thing, and the necessity for the dissemination of this little knowledge is all we contend for. As to the Colorado Potato Beetle, we do not think it will easily reach this country—if it ever does; but if to be forewarned is really to be forearmed, then on its first appearance every cultivator of potatos in this country will be interested in exterminating it, and we do not doubt that where there is the will a way will soon be found. We therefore do not look with alarm upon the threatened invasion.—(*Abridged from the "English Mechanic."*)

## GARDEN LILIES.—CHAPTER IV.

RESUMING from p. 182 (1873), our chapters on Lilies, we come next, in the Eulirion group, to *L. giganteum*, a remarkable Indian species, more or less closely related to the Japanese *L. cordifolium*, both these forms, whether species or varieties, differing widely from all other true Lilies which are known, in the large size and heart-shaped form of their root-leaves.

5. LILIUM GIGANTEUM (*Bot. Mag.*, t. 4673).—This noble Lily, as just remarked, is distinguished from all known species except *L. cordifolium* by its broad, heart-shaped leaves. From that species, which it closely approaches botanically, it is known as a garden plant by its considerably larger growth, and its broader perianth segments. Sir W. J. Hooker describes it as the Prince of Lilies, and Dr. Wallich, its discoverer, calls it a "majestic Lily," which it truly is, "growing sometimes to a size which is quite astonishing," a fruit-bearing specimen measuring fully 10 ft. from its base to its apex. *L. giganteum* appears to have been first flowered in this country by Messrs. Cunningham, of Comely Bank, Edinburgh, in 1852, the plant having attained a height of 10 ft., with the flowering portion 20 in. long. The bulbs are as large as an apple, and are made up of fleshy ovate scales. The stem, as already stated, often reaches to a height of 10 ft.; it is erect, glabrous, rounded, from 1 in. to 2 in. in

diameter in the lower part, and gradually tapered upwards. The leaves have a cordate ovate blade 12 in. to 18 in. long, with a rounded sinus at the base, and an acute or acuminate apex; they are deep green, coriaceous, copiously net-veined, the lower ones on channeled stalks a foot long; the upper ones smaller, and with gradually decreasing stalks, the uppermost of which are under an inch in length. The flowers grow from six to twelve together, in a raceme 12 in. to 20 in. long, the lower ones drooping; they have a funnel-shaped perianth 5 in. to 6 in. long, white, streaked with blood-red in the throat, the segments oblanceolate bluntish, spreading at the top, the inner ones broadest, without hairs or papillæ on the claws. In the fruiting state the pedicels are all erect.



LILIUM GIGANTEUM.

This plant is stated by Major Madden to be common in the damp thick forests of the Himalaya, growing in rich black mould, the bulb close to the surface, at from 7,500 ft. to 9,000 ft. above the level of the sea, where it is covered with snow from November to April, or thereabouts. It is a grand Lily, the general aspect of which is well shown in our small engraving. There is a fine figure of this plant in Wallich's noble work, *Tentamen Floræ Nepalensis*, tt. 12-13.

6. LILIUM CORDIFOLIUM.—This is sometimes regarded by botanists as not being specifically distinct from *L. giganteum*, but without entering into this scientific question, we may regard the two plants as sufficiently distinct for garden purposes, though having a general resemblance in aspect. The present plant grows from 3 ft. to 4 ft. high, and has broadly ovate leaves, which are deeply cordate at the base, the angle of the sinus being described as cuneate-truncate, acute at the apex, and petiolate. The flowers vary from two or three up to eight on a stem, the perianth being from 4 in. to 6 in. long, with the segments considerably narrower than in *L. giganteum*. It is said to differ further in having the valves of the capsule three-keeled.

*L. cordifolium* is recorded as an inhabitant of the whole of the Japanese Islands, extending northwards to the Kurile group. It is found in shaded woods, at an elevation of 400 ft. to 600 ft. above the sea-level, growing, according to Walford, in moist situations. We believe Mr. Noble, by whom this plant is cultivated, from bulbs introduced by M. Fortune, finds it equally hardy as *L. giganteum*, and permanently distinct. It is figured in *Siebold's Flora Japonica*, tt. 13-14.—T. MOORE.

## PROTECTING TREES FROM FROST

### BY THE PERFUMES OF SWEET FLOWERS.

HAS any one ever proved the potency of the odour of Violets or Wallflowers as to the protection against frost of the early blossoms of Peaches and Apricots? I have often been much struck with the safety of fruit-trees in old-fashioned gardens and on the fronts of cottages. In both positions the trees generally had the close proximity of sweet-scented flowers. How far was their odour a canopy of safety? Shelter has mostly the credit of saving the blossoms under such circumstances, and no doubt its influence is great. But perhaps the direct result of scent is still greater. I have observed some curious effects resulting to a *Chimonanthus* on a wall, with a bank of violets under it; as also—to go from scent to pollen which is almost without odour—I believe, other instances where the pollen-dust of yews in the air seems to have sufficed to protect tender plants and blossoms from the frost. It would be interesting to note whether trees with borders of violets at their feet escape better than those which have none. Many gardeners grow violets on fruit-tree borders, and even south-wall borders, for early work,—and data on this matter could be easily collected. My experience points to the usefulness of perfume as a protecting agent. But of course in a delicate matter of this kind, one likes to be backed by a multitude of examples. An accumulation of facts is needed, and if they point in the way I expect, then we might add to their potency by growing more odoriferous plants on purpose. Instead, for instance, of unrolling canvas at night, suppose we roll a border of Golden Thyme at the feet of our trees, or beds of Winter Savory, or line the bottoms of our walls with Sweet Brier, Honeysuckles, Berberries, Rosemary, Allspice, Daphnes, &c.

There may be more in these suggestions than there seems. I cannot but think that a good deal of the immunity from frosts in the old gardens arose from their intermixture of spring flowers with their trees. Whole hosts of early bulbs, shrubs, and other flowers came forth in the spring, and mingled their sweetness with the harshness of March winds, and probably so took some of their stinging coldness out of them. Tyndall's latest researches on heat seem to give such views a scientific basis. He found perfume the most powerful absorber of radiant heat. Taking the atmosphere at nil or unity, he gives (*Heat as a Mode of Motion*, p. 368) the following table of the absorptive power of the following perfumes:—

| *Perfume.* | *Absorption.* | *Perfume.* | *Absorption.* | *Perfume.* | *Absorption.* |
|---|---|---|---|---|---|
| Patchouli | 30 | Neroli | 47 | Oil of Laurel | 80 |
| Sandal-wood | 32 | Lavender | 60 | Camomile-flowers | 87 |
| Geranium | 33 | Lemon | 65 | Cassia | 20·9 |
| Oil of Cloves | 33·5 | Portugal | 67 | Spikenard | 35·5 |
| Otto of Roses | 36·5 | Thyme | 68 | Aniseed | 37·2 |
| Bergamot | 44 | Rosemary | 74 | | |

A number of dried herbs from Covent Garden Market were also tried, with the following results:—Thyme gave a ratio of 33 times that of the air; Peppermint, 34 times; Spearmint, 38 times; Lavender, 32 times; Horehound, 41 times; Cinnamon, 53 times that of the air. It would be idle, the author says, to speculate on the quantities of matter implicated in these results. Probably they would have to be multiplied by millions to bring them up to the pressure of ordinary air. Thus,—

> "The sweet South
> That breathes upon a bank of violets,
> Stealing and giving odour,"

owes its sweetness to an agent which, though almost infinitely attenuated, may be more potent as an interruption of terrestrial radiation than the entire atmosphere from "bank to sky."

If so, the advice to plant out the cold with sweet-scented flowers may really prove practical, after all. Why not? Does not the fact that scents are most freely liberated at night point this way. May they not be Nature's antidote to the energy of terrestrial radiation, when the sun has sunk to rest, and left the earth, for cold to do its worst?—to put the matter popularly rather than correctly. May I invite the thought of your readers to this matter, which is one of great practical moment. In the war with climate, no weapon is too weak or too insignificant, and none too strong to use, for climate year by year seems to become more erratic, and hence more dangerous.—D. T. Fish, *Hardwicke.*

⁂ Two facts in connection with this subject may be noted. It is well known that in some instances, which have been made the subject of experiment, the discharge of the pollen is accompanied by a considerable emission of heat. It is also, we believe, considered that at least in many flowers the pollen is the source of their odour. There does, therefore, seem to be some connection between odour and warmth, enough to justify further observation and inquiry.—Ed.

## ON KEEPING LATE MUSCAT GRAPES.

As your correspondent, Mr. Plester (p. 52), wishes for the experience of other growers in respect to keeping Muscat Grapes late, in bottles of water, I will explain to him the way in which they keep well with me. I generally manage to have them in good condition up to the end of February, and this year up to this date (March 10) I have still a few bunches left, with the berries plump and good. They were cut from a vinery about the middle of December, and put into bottles of water, which were tied to the wires in a late house of Lady Downe's seedling. The bottles I use here are made of clear glass, so that the state of the water can be seen, and more added when rendered necessary through evaporation; a few pieces of charcoal put into the bottom of the bottles keep it sweet and clear as long as required.

I find I can keep ripe Grapes best and longest in bottles of water, by hanging them in a late vinery, where plenty of ventilation can be given, as well as a little artificial heat in damp, cold weather, some shading being likewise required on bright sunny days in April and May. Three years ago I had a dark room fitted up with shelves to suspend the bottled grapes on, and although the room was well ventilated, the grapes damped, and did not keep so well as in the late vinery. When they are kept in such a vinery the growing vines in the house begin to get into full foliage by the middle of May, when all the Grapes then left in bottles may be removed and put into a fruit-room, where they will keep the supply up for a few weeks longer, should they be required to do so.

To have Muscat Grapes well coloured and finished for late keeping, they ought to be forced in January or the beginning of February, for I find the best ripened bunches always keep the best. No varieties of Grapes require more time for ripening than the Muscat, even when there is a good command of artificial heat; and to have them very fine, the best time to start them is about Christmas. —William Tillery, *Welbeck.*

## NOTABLE NEW PLANTS AND FLOWERS.

[F.C.C. = First-class Certificate.]

CATTLEYA Veitchiana [F.C.C.].—One of Mr. Dominy's hybrids, raised between *C. labiata* and *C. crispa;* the sepals and petals are of a pale violet-pink, and the lip tipped with rich purplish-crimson, and handsomely fringed.—*Messrs. Veitch & Sons: R.H.S.*, *March* 18.

Chysis Chelsoni [F.C.C.].—A hybrid raised at the Chelsea Nurseries between *C. Limminghii* and *C. bractescens*, in which the flowers are large, the sepals and petals broad and flat, of a clear buff-colour, with a patch of orange-red near the end. Being very distinct in character, it is a decided acquisition.—*Messrs. Veitch & Sons: R.H.S., March* 18.

Clematis Lucie Lemoine [F.C.C.].—A charming, pure white, double-flowered variety, belonging to the *C. Fortunei* section, and well adapted for conservatory work.—*Messrs. Veitch & Sons: R.H.S.*, *March* 4.

Cypripedium Argus [F.C.C.].—A new importation in the way of *C. barbatum*, and partaking also of the character of *C. purpuratum.* Its name alludes to the numerous eye-like dark bearded spots on the petals; it has been introduced from the Philippines.—*Messrs. Veitch & Sons: R.H.S.*, *March* 18.

Epidendrum Catillus [F.C.C.].—This was shown as *E. Imperator*, and is a somewhat tall-growing species, bearing terminal spikes of bright red flowers, with a fringed lip. This was said to be the first time this species had flowered in Europe. —*Mr. Denning: R.H.S.*, *March* 4.

Hyacinth Anna (S.W.) [F.C.C.].—A fine bold creamy-white variety, with very large, handsome bells, and forming a noble spike.—*Messrs. Veitch & Sons: R.H.S., March* 18.

Hyacinth Cavaignac (S.B.) [F.C.C.].—Silvery-grey, tipped on the segments with pale blue; pips large and stout; short-tubed, forming a symmetrical handsome spike.—*Mr. W. Paul: R.H.S.*, *March* 18.

Hyacinth Quirine Christine (s.r.) [f.c.c.].—White, striped with delicate pink, fine spike and bells.—*Messrs. W. Cutbush & Son: R.H.S.*, *March* 18.

Hyacinth Sir Garnet Wolseley (s.b.) [f.c.c.].—Shaded violet, with pale centre, very fine shape, and close spike. In the style of Lord Palmerston.—*Messrs. Veitch & Sons: R.H.S.*, *March* 18.

Hyacinth Mr. Plimsoll (s.w.) [f.c.c.].—Pure waxy-white, large bells, and fine spike.—*Mr. W. Paul: R.H.S.*, *March* 18.

Narcissus orientalis flore pleno [f.c.c.].—A very old double form, the flower white, the base of the centre petals yellow. It is quite distinct from what is now imported as the double Roman Hyacinth.—*Messrs. Veitch & Son: R.H.S.*, *March* 18.

Polyanthus The Bride [f.c.c.].—A charming pure white bedding variety; the centre rayed with orange; flower of good form, in large symmetrical trusses. —*Mr. R. Dean: R.H.S.*, *March* 18.

Primrose Splendour [f.c.c.].—An exceedingly fine variety of the true Primrose type, with very large rosy-crimson flowers of fine form.—*Mr. R. Dean: R.H.S.*, *March* 18.

Rhododendron Duchess of Edinburgh [f.c.c.].—A hybrid raised between *R. Lobbii* and the pale-flowered *R. Princess Royal*, and bearing trusses of trumpet-shaped orange-scarlet flowers, which are very bright and showy.—*Messrs. Veitch & Sons: R.H.S.*, *March* 4.

Rhododendron Early Gem [f.c.c.].—A dwarf-growing and very free and early-flowering type, very hardy, and admirably adapted for forcing; the flowers of a bright rose-colour.—*Messrs. Veitch & Sons: R.H.S.*, *March* 4.

Rose (h.p.) Madame Lacharme [f.c.c.].—A fine pale rose, with a deep blush centre; flowers large and full, and a capital forcing variety.—*Mr. H. Bennett: R.H.S.*, *March* 18.

Rose (tea) Madame François Janin [f.c.c.].—Bright buff-orange, very distinct in character, and most charming in the bud.—*Mr. H. Bennett: R.H.S.*, *March* 18.

Rose (tea) Perle de Lyon [f.c.c.].—Very bright buff-yellow, a pleasing hue of colour.—*Mr. H. Bennett: R.H.S.*, *March* 18.

## LUCULIA GRATISSIMA.

I BELIEVE that the mild temperature of the Camellia-house is the best possible medium in which to grow to perfection the *Luculia gratissima*. This deliciously fragrant plant is one of those neglected subjects which, notwithstanding their great merits as winter decorative plants, are now seldom met with in cultivation. Most assuredly, it has but few rivals, producing, as it does, its clusters of richly fragrant flowers in the greatest profusion at the dullest season of the year.

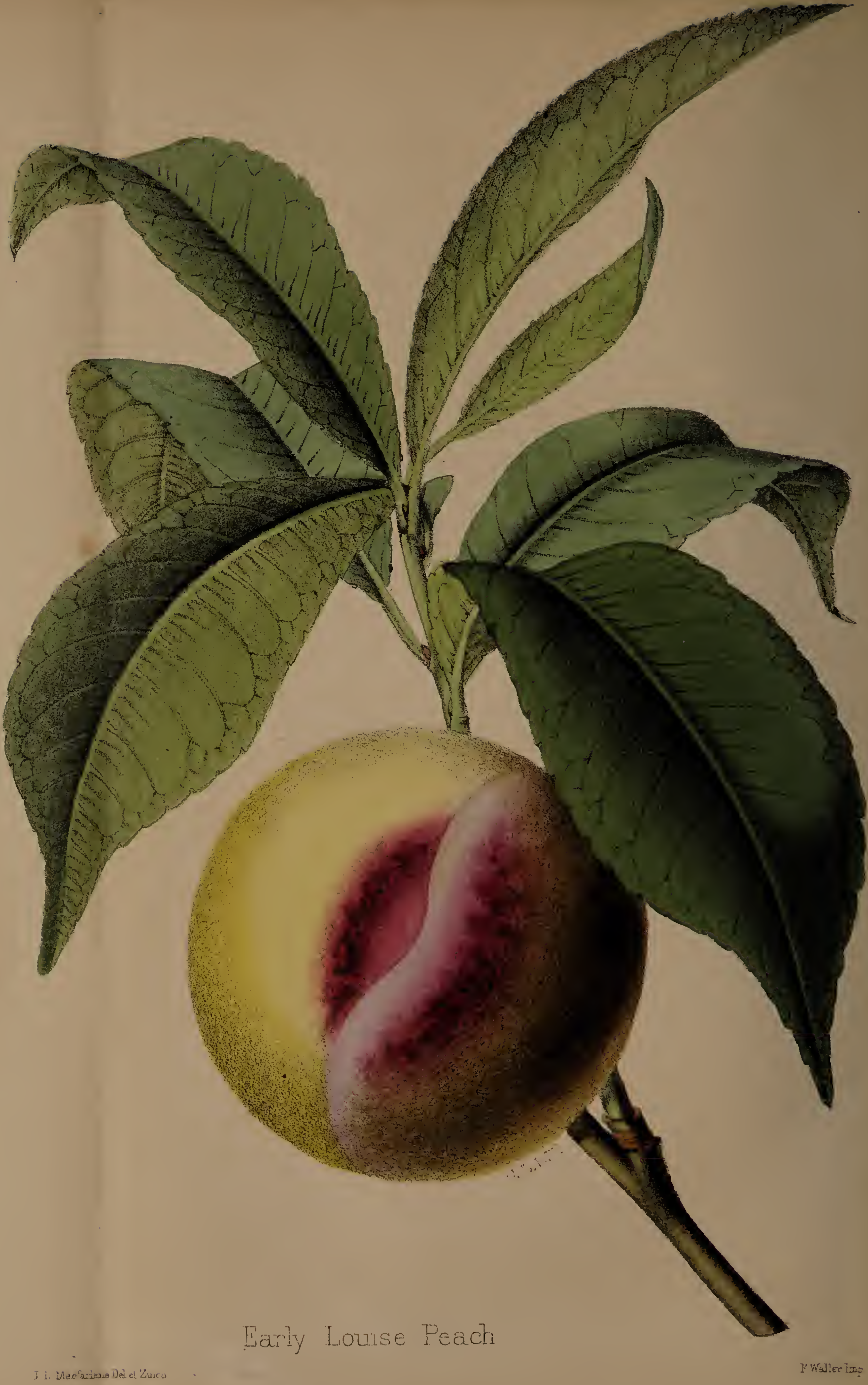
There is a grand example of the *Luculia*, planted out in the bed of a Camellia-house, at Spring Grove, Bewdley, which confirms me in this opinion. The house is 96 ft. in length, 24 ft. wide, and 20 ft. high, span-roofed, with glass front, the back wall being clothed with Camellias planted out. The main pathway is near the front, where there is a narrow stage, supporting a collection of flowering plants. In this house, the Luculia thrives luxuriantly. The plant is 14 ft. high and about the same in diameter, and the trusses of bloom measure over 10 in. in diameter. It commences to flower the first week in November, and the greatest number of expanded heads of bloom at one time, in January last, was about 200.

The Luculia, no doubt, is impatient of root-restriction, and somewhat difficult to manage in pots; neither is it to be extensively recommended for this purpose, as the foliage and inflorescence are under these circumstances alike poor, as composed with those of plants that are planted out. In most establishments there is to be found a suitable position for the growth of the *Luculia*. The Camellia-house recommends itself as the best possible position, but it is in comparatively few places that this is attainable; the next best position would be the cool fernery or conservatory. The *Luculia* is well suited to plant against a pillar or wall, provided it is not subjected to cutting draughts, of which it is peculiarly susceptible. It grows freely in a sound sandy loam, such as the surface of an old pasture, cut thin, and this will not be benefited by any admixture unless it is deficient in sand, which is necessary to maintain porosity.

When plants of this description are permanently planted out, manures and leaf-soil should not be added to the loam, for in the first place they are apt to produce an undue luxuriance of growth at a time when it is least required; and in the next place, they are liable to cause it to become inert and sour. This has been frequently demonstrated by the health and abundance of roots met with in plants which have grown for years in simple soil, as compared with the root-condition of such as are planted in rich compounds. When the plants become thoroughly established, and show signs of poverty and exhaustion, nourishment is more beneficially administered in the shape of top-dressing and liquids. The system of gorging to satiety in youth, when the soil is full of vegetable fibre, is barbarous in the extreme, and only calculated to produce debility of constitution and premature exhaustion. In the case of the *Luculia*, this is not required, as, when planted out, it grows very rapidly, requiring repeated pinchings-in of the young shoots, particularly when the plants are young, in order to secure uniformity of growth; while it must also be freely cut back every spring after blooming. Thus, the somewhat straggling habit of the *Luculia* is successfully combated, and a free and healthy growth promoted.—GEORGE WESTLAND, *Witley Court.*

## BERBERIS DARWINII FOR HEDGES AND POT-CULTURE.

NOT very many years ago I looked upon the lovely *Berberis Darwinii* as being somewhat tender, as a plant which might require coaxing and codling, and which was never likely to be of any great use; perhaps here and there a gardener or an amateur may think the same now. Yet what are the real facts? It is one of the hardiest of shrubs—the freest grower and flowerer that any one could wish for or desire. It adapts itself to wall-fronts, by the very smallness of its foliage, and the freedom of its floral display. It grows



Early Louise Peach

J. L. Macfarlane Del et Zinco

F Waller Imp

freely in the open and most exposed shrubberies—so freely as to make shoots five feet high in the season, strong, stiffly erect, and robust. And for a hedge, what a plant! Dense to a degree, and furnished with a base such as all Barberries have that are allowed sufficient room, by the incessant division of short-jointed, thick shoots, which is its habit of growth,—added to which it has the habit of pushing young shoots from around its base. I do not hesitate to say that in poor, stony, light soil, or in dry soil, where, perhaps, the laurel would not do well, *Berberis Darwinii* would succeed to perfection.

A hedge formed with the Barberry, especially if moderately elevated at the ground-line above the ordinary level, as hedge-rows are, would display a golden sheen inconceivably beautiful, as the blooms were set off amidst its shining dark foliage, backed up by the dark background of the hedge centre. Of course such a hedge would be selected as a boundary-line only when supported by an outer aid, or for a division within protected grounds. I am not so certain, however, that its dense, extremely prickly leaves would not prove a bitter enemy even to the harder mouths of cattle, nor do I think they would like its peculiar, bitter flavour. Again, as a pot plant, to be grown in pots, freely shifted annually, plunged out of doors during summer, and brought gradually into bloom in the month of March, it is excellent. My plants bloomed freely in the open in December, and are again bud-laden *en masse.*—WILLIAM EARLEY.

## RIVERS' EARLY LOUISE PEACH.

WITH AN ILLUSTRATION.

OUR readers will, we are sure, join with us in thanking the Rev. W. F. Radclyffe, of Okeford-Fitzpaine, for sending examples of this excellent early Peach for illustration in the FLORIST AND POMOLOGIST; and no less hearty must be our thanks to Mr. Thomas Rivers, for having originated this and many other useful novelties, in so indispensable and favourite a class of hardy fruits. Our note of the examples submitted to us reads thus:—Fruit medium size, rather oblate, with a deep and rather broad suture, ending in a depression at the top of the fruit. Skin pale straw-yellow where shaded, mottled with crimson on the sunny side, the colouring thinly flushed with crimson dots, which extend, though more sparsely scattered, over most of the surface. Flesh whitish, without any tint of red near the free-stone, very tender and melting, with abundant juice, and a sweet and remarkably pleasant flavour. Good.

Mr. Radclyffe remarks, in a note which accompanied the fruits:—"I send two specimens of River's Early Louise Peach. It is sweet, early, and delicious. They were grown on a severe East-aspect wall, where all perished after setting, except the Royal Georges, which are good on all walls, indoors and out. Early Louise has small flowers, and kidney-shaped glands. It is a long way earlier on a severe east-wall than any other early ones, such as *Early York, Early Victoria,* and *Early Alfred* are, on a warm south wall. I consider it a great 'gain,' and that it adds another gem to Mr. Rivers' already radiant crown. They were ripe on August 1."

In a subsequent communication, Mr. Radclyffe writes:—"This Peach does Mr. Rivers great credit, and from its earliness is a great Pomological gain. It is of excellent flavour, a good setter, of fair size, and hardy in its nature. The specimen sent was not so well coloured as it would have been had it grown on a south wall. It was grown on a severe east wall, where nothing but the Royal Georges set their fruit. The fruit was ripe on August 1, which was three weeks earlier than the earliest Peaches on the south wall. Had it been on the south wall, I believe it would have been ripe by July 14 or 16. It is a seedling from Rivers's Early Albert Peach. The flowers are small, and the glands reniform. I have not yet fruited Early Beatrice or Early Rivers, but hope this summer to be able to compare the three together, both as to earliness and general excellence. The leaf-buds and fruit-buds are numerous and near together, which are great points. Between two fruit-buds there is a leaf-bud. Some good Peaches lack this attribute."—T. M.

## TRITELEIA UNIFLORA IN POTS.

SOME persons have said that it is difficult to flower this charming hardy spring plant in pots. My experience of it is just the opposite to this, and so thoroughly successful, that I feel I should only be doing bare justice to a very useful flower by stating as much. In the spring of 1873 I put into 32-pots some bulbs of *Triteleia uniflora* that I had been compelled to lift from the open ground through change of residence. I did not expect flowers that season, and only a few blossoms appeared; the bulbs made a fair growth, and when the foliage began to decay, the pots were put by on a shelf in my greenhouse, and allowed to take care of themselves. In September last I noticed that the new growth was appearing. The plants were then sparingly but sufficiently watered, and all through the winter they yielded charming tufts of fresh green foliage. The flowers began to put in an appearance about the end of February, and for several weeks past they have been most numerously produced, and they now contain from 20 to 25 flowers each, with succession flowers coming on. That is one great feature of the *Triteleia*—its successional-blooming character. People who see it for the first time are much charmed with it, and no wonder, when its chaste white flowers, tinted with azure-blue, are so profusely furnished. What if it is a Garlic? It is a beautiful Garlic, and it emits no disagreeable odour, unless the leaves or flowers are handled. I have found it to be a most acceptable pleasure-giving, because early-flowering, plant, and I cherish and recommend it accordingly.

As soon as the bulbs begin to show signs of going to rest, I shall allow them to dry off, and then repot about eight or ten of the largest in 32-pots, using a mixture of light loam and leaf-soil; and the pots I shall plunge in coal-ashes under a cool, shady wall, where they will take care of themselves till autumn comes round. Then I shall remove them to a cold greenhouse, where they will soon begin to make their growth. The smaller bulbs will be placed in store-pits and treated in a similar way. Henceforth the bulbs will not be disturbed for two years, that is to say, they will yield two seasons, blooming perhaps three before they are again shifted.

Associated with the beautiful *Triteleia*, I have *Primula denticulata*, *P. nivalis*, with its snowy-white blossoms, *P. intermedia*, *Myosotis dissitiflora*, *Lithospermum prostratum*, *Viola pedata*, *Leucojum vernum*, *Scilla bifolia*, *S. sibirica*, Dog-tooth violets, sweet-scented jonquils, and white and blue grape hyacinths. Where such a glorious procession of vernal beauties can be had in bloom in a cold greenhouse during March and April, what is the use of worrying oneself over a few scarlet geraniums and their preservation during winter? All that I have named can be grown in a cold house during the hardest winter, and in such bright flowerets we can see and enjoy something of that wealth of forms and flush of hues, which open-handed spring lays so freely and lavishly at the feet of the children of men.—R. Dean, *Ealing*.

## BEGONIAS FOR BASKETS.

BEGONIAS generally recommend themselves to the cultivator for several reasons. They are readily propagated by division, while cuttings of the stem or leaves root freely in a slight bottom-heat; they are, moreover, easily grown, are profuse flowerers, and their flowers and sprays come in very useful for cutting, especially as one or two of the species are perpetual bloomers. *B. Dregei*, when well grown, is one of the prettiest of decorative plants; *B. weltoniensis* is still more showy; the scarlet-flowered *B. fuchsioides* and the large rosy-flowered *B. nitida* flower all the year round, if trained up the wall of a warm, sunny stove; and among the new hybrids we may expect some sufficiently hardy and distinct to make their way as first-class bedding-plants, not to mention their adaptability for pot-culture. It is, however, of their use as basket plants that I would here speak more fully. A *Begonia* in a hanging-basket looks like a fish in water—*i.e.*, quite at home. If the foliage is coloured or variegated, its tints look richer when seen between the eye and the light, while some of the dwarf and scandent species make the most elegant of all basket-plants. Mr. Speed has taught us much with respect to the growth of plants in hanging-baskets, as exemplified in the great conservatory at Chatsworth. Still, I do not remember that he uses *Begonias* in his little but veritable hanging gardens.

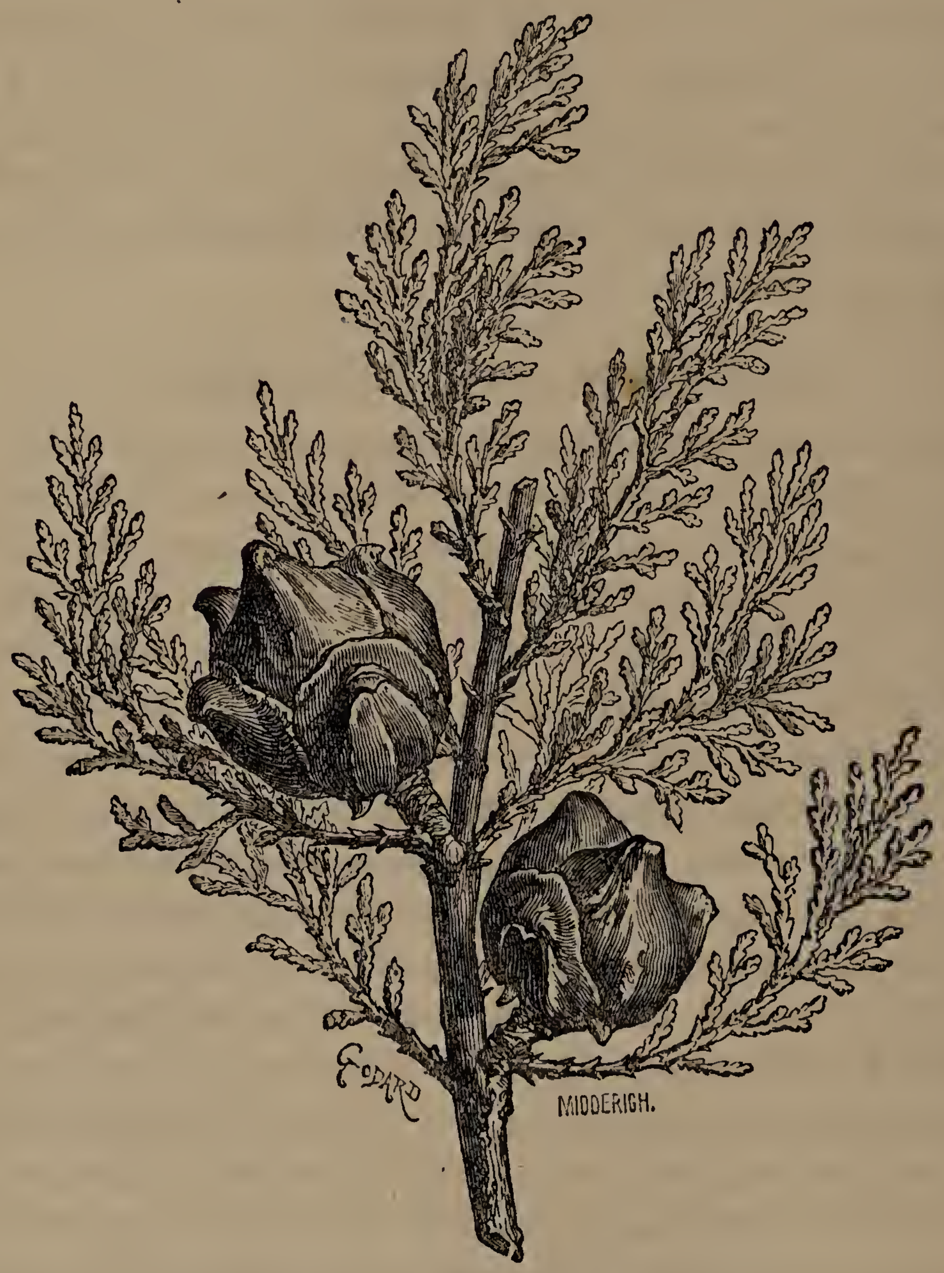
Some naturalist, wishing to express the microcosm of the animal world, wrote the following:—

> "The little fleas that do so tease
> Have lesser fleas that bite 'em,
> And these, again, have other fleas,
> And so *ad infinitum*."

And so at Chatsworth, first we have a magnificent out-door garden; then the grand tropical garden, covered with glass; and within this, again, are dozens of lesser hanging gardens, remarkable for their freshness, brightness, and beauty.

As to the kinds most suitable for basket-work, nearly all may be used except the very tallest growers, and the best way is to begin with small plants, rooted cuttings, in fact, which can then be trained as required. *B. fuchsioides*, *B. hybrida multiflora*, *B. insignis*, *B. Daviesii*, *B. foliosa*, *B. Dregei*, *B. Saundersii*, *B. Sedeni*, and its numerous sub-varieties, are all good, while, as above mentioned, all the ornamental-leaved varieties look better in baskets than elsewhere.

It is but right to add that the above remarks have been suggested by the specimens now to be seen in the Begonia-house at Kew.—F. W. BURBIDGE.



## CUPRESSUS MACNABIANA.

WE have in this conifer a densely-branched evergreen shrub, of pyramidal outline, and one which, coming from an elevation of 5,000 ft. on the Shasta mountains in the north of California, is perfectly hardy. It is of compact habit, growing from 6 ft. to 10 ft. in height, with brownish-red bark, and short mostly opposite branches, curving upwards at the points, and thickly set with short dense somewhat tetragonal branchlets, which bear in opposite pairs, distant glaucous spreading leaves, decurrent at the base, keeled, and tapered to a sharp point in the young plants, but blunter, shorter, and loosely imbricated in adults; there is a hollow gland on the outer or under-surface of each. The male catkins are excessively numerous, and discharge copiously a beautiful yellow pollen. The cones are of a deep shining brown, very firmly attached by means of a woody peduncle, and composed of about six more or less quadrangular scales, each bearing about its centre, or more frequently towards the tip, a rounded blunt protuberance which is sometimes more elongated and attenuated.

This species of Cypress, M. Carrière notes, is remarkable for the apple-like scent which it gives off, so that the branches cut and put into water in an apartment purify the air in it. In a hygienic point of view, it would be a good thing to place some of it in apartments, especially in those which are little ventilated, or the air of which is more or less tainted by the presence of unhealthy matters. When one rubs the branches, especially the younger and more herbaceous ones, this odour remains on the hands long after. Our figure is from the *Revue Horticole.*—T. MOORE.

## ÆSCULUS INTERMEDIA.

IN the nurseries of M. Scipion-Cochet, at Suisnes, is a Chestnut-tree of unusual aspect, presenting characters intermediate between those of the common Horse Chestnut *(Æsculus Hippocastanum)* and the Red Horse Chestnut *(Æ. rubicunda)*, but so mixed up that it is difficult to say to which of these the tree is most nearly related. M. André consequently, in the *Revue Horticole,* proposes to call it *Æ. intermedia.* The tree is of medium size, and of erect, pyramidal form, like the Horse Chestnut, but has shorter wood. The leaves are like those of the Red Chestnut, with five oval-cuneiform, acuminate, coarsely dentate lobes, having sharp teeth. The flowers form a compact irregular thyrse, the calyx being rose and green, the petals yellowish white, the two upper ones spotted with yellow at the base, passing to salmony rose, and the stamens having bearded rosy filaments. The capsules are sometimes quite smooth, sometimes, and more frequently, bristling with projecting points.

This curious tree came from a seed of the Red Chestnut, sown about 1843. As it is well known that the seedlings of this tree are very variable, M. André inquires whether in this we can trace the result of a fertilisation with the widely spread White Chestnut, or the first stages of a reversion from the Red Chestnut to the Horse Chestnut, and hints that his opinions as to the limits of species have undergone change since he has seen in the nurseries of the Paris Muséum some trees of the White Walnut (*Juglans regia*) give birth to specimens almost identical with the American Walnut *(Juglans nigra).*—T. M.

## GARDEN GOSSIP.

STARTLING have been the advances made during the last few years, both in the quality and the culture of the *Cyclamen as a Decorative Plant*, and as one of the most successful pioneers of progress the name of Mr. H. Little, of Cambridge Park, Twickenham, may be mentioned. Amazing improvements, both in point of form and colour, have been worked out, in the course of two generations, by means of patient and judicious intercrossings by Mr. Little, whose collection immeasurably surpasses anything of the kind we have elsewhere seen. Mr. Little has been particularly fortunate in his choice of a pet flower, for there is perhaps no other plant, which, blooming as it does from autumn onwards till spring, could have given him such a continuous display of charming flowers. The brilliancy, too, which has been thrown into their colours is something really astonishing, as the following statement will show:—In 1870 Mr. Little gained a certificate for a purple variety called Purpureum, and in 1871 for another called Queen of Crimsons, both being decided advances upon the varieties in the same class of colours at that not very remote date. From these, crossed in various ways, a batch has been obtained which, with increased perfection of form, has, in very many instances, thrown marvellous depth and richness of hue. In one named the Prince of Purples, the colour is a solid violet-crimson, the purple flush rich and full-toned to the very tips of the petals, which are intense purple at the base; in others, named respectively Meteor and Rose Queen, it is a carmine-crimson, with the base of the richest blood-crimson, the latter being the larger flower, but the former remarkably high-coloured at the base. These two under sun-light show up with a dazzling brilliancy which must be seen to be appreciated. Mr. Little's Snowflake was another certificated variety, of the purest white; and in this direction and among the pale-coloured sorts generally there are flowers of wonderful merit from the florist's point of view. One variety which we noticed had the mouth very deep purple, and the lower portion of the reflected petals of a lilac-purple, passing to white in the upper part; this is quite a novelty. Mr. Little very wisely breeds for quality as well as other desirable properties, and will have none of the coarse ribby flowers with which growers are liable to be led away from their mere size; his aim is to secure refinement of texture and marking; the surface must be as smooth as if the blossoms had been carved, and the colour in selfs dense, solid-looking, and uniform to the very tips of the petals. Amongst other features, breadth and rotundity of petals are insisted on, and with these a symmetrical imbrication of the twisting petals, purity of tint, and when any marking is present, a definite ring of colour at the mouth, not a confused blotch running unequally up the limb. To the above characters robust growth and a stiff, stocky habit have to be added. These qualities all realised, there are few choicer flowers than a nicely-grown Cyclamen.

—— MESSRS. CROSSE and BLACKWELL furnish to the *Gardeners' Chronicle* the following interesting particulars as to the *Consumption of Fruit for making Preserves* by their firm:—"The total quantity of all kinds of fruits for the season 1873 is 1,100 tons, consisting of the following proportions: 300 tons of Raspberries, 200 tons of Strawberries, 100 tons of Red Currants, 100 tons of Black Currants, and 400 tons of other kinds. These fruits are mostly grown within 20 miles of London, chiefly about Bexley Heath and its neighbourhood; they are gathered during the day-time, and travel by road in the night, arriving at our factory very early in the morning, and are principally used for making jam, with the addition of pure refined white sugar. In order to retain the distinctive flavour and freshness of the fruit, every appliance is adopted to boil the fruit the same day as it arrives. The kinds of fruit for bottling and jam are Gisborne's and Orleans Plums, Damsons, Greengages, and green Warrington Gooseberries, for bottling; ripe Warrington Gooseberries for jam. Although," they say, "our consumption is probably the largest of any single manufactory, still it only bears a small proportion to the total quantity annually supplied to the general public."

—— THE *Thuja occidentalis lutea*, called in America, George Peabody, was awarded a First-class Certificate when shown at South Kensington in February, 1873, by Mr. G. Jackman. Its habit is dwarfer and more compact than that of its parent, the common American type; and Messrs. Maxwell Brothers, of Geneva, N.Y., claim for it the richest golden-yellow colour of any evergreen, not merely the tips of the leaves, but from 1 in. to 3 in. of the current year's growth being covered with this brilliant hue, which is a far more decided golden colour, they say, than that of *Biota elegantissima*, and the colour being reliable, as neither the sunshine of hot summers nor the frosts and winds of winter have injured it. From what we have seen of this variety, we believe it will prove a good garden plant, distinct in character from the equally good golden *Cupressus Lawsoniana lutea*, and the *Thuja (Biota) semperaurea.*

—— M. LORENZ, a gardener at Bunzlau, in Silesia, has accidentally succeeded in *Cultivating the Morel by means of Tan*, in the following manner, as quoted in the *Field*:—A short time since he had occasion to make a hot-bed for wintering roses, verbenas, &c.—the lower lining of it, 14 in. to 15 in. in depth, consisting of leaves of the lime-tree; the upper one, 9½ in. thick, of tanner's spent-bark (fir mixed with a little oak bark). Over the two linings was spread a thin covering of the same kind of leaves, and upon this came the frame. Into the bed thus formed the pots were plunged up to the rim, and according to the state of the weather, the frame was either shaded and protected against the frost, or so arranged as to admit light and air. On taking up some of the pots at the end of March, the tan in the bed was found to be overrun with a network of fibres and threads resembling mushroom-spawn, and a month or six weeks later a fine crop of morels sprang up. As the fungus is frequently met with in the neighbourhood of Bunzlau, some spores of the same had doubtless found their way into the tan of the original hot-bed, and thus been placed under circumstances favourable for their development. M. Schollmayr, of Laybach, in Carniola, with a view to check the ravages of snails and slugs which year after year destroyed the buds put forth by young seedling fruit-trees in his nursery, covered the ground in the autumn of one year and the spring of the next a foot deep with spent-tan, chiefly consisting of fir bark and gall-nut meal. For a twelvemonth or more the ground was freed from the snails, and the young trees grew vigorously; great quantities of fine, delicately-flavoured morels also appeared, shooting up most abundantly wherever the top-dressing was thickest and consisted of bigger pieces of the bark.

—— BARCHARD'S *Seedling Apple* was raised about thirty years ago at Putney Heath, by Mr. M. Higgs, then gardener to Joseph Henry Barchard, Esq.; in about five years it produced an abundance of fruit. Mr. Robert Thomson pronounced it a first-class apple, and Mr. Dancer, of Fulham, also thought it a first-class variety, and had cuttings for grafting. In Mr. Dancer's collection will also be found Higgs's Seedling, a large, pale-coloured, beautiful kitchen apple, of a brisk flavour much wanted in culinary apples. Barchard's Seedling was named after Mr. Higgs's much-respected employer.

—— THE first number of a new work entitled *Orchids, and How to Grow Them*, by S. Jennings, Esq. (Reeve & Co.), has just made its appearance. Its object is to afford information to residents in tropical climates, such as will enable them to grow these beautiful plants successfully, instead of allowing them to perish from neglect; while the author's experience of a tropical climate may, it is hoped, furnish some hints to English cultivators. The four subjects selected for illustration are first-class plants, but we can scarcely say as much of the drawings, which are coarse and rough, and very indifferently coloured. The text is written rather for the use of Indian than for home cultivators. We shall look with interest for the future revelations of the author's Indian experience.

—— THE phenomenon of *Gumming in Fruit Trees* has lately been studied by M. Soraner, who confirms the observations of his predecessors in referring the change in question to the conversion into gum of the secondary layers in the cells and vessels. Not only are the cellular membranes transformed into gum, but new gum is formed from the sap, which is thus diverted from its proper use. The gummy exudation is produced in consequence of the transformation of the secondary layer of the vessels into gum, and from the formation in the woody tissue (as happens normally in the bark) of an abnormal cellular tissue, which speedily becomes converted into gum. The bark cracks, and hence the justification of the practice of incising the bark. The cause of the disease, however —that which disturbs the balance—remains unknown.

—— M. BOUSSINGAULT has communicated to the French Academy of Sciences some observations on the *Cracking of Fruits*, which are of much interest to the horticulturist. The phenomenon is unfortunately too well known, and is undoubtedly attributable to an accumulation of water in the tissues, but as this cannot be due to an arrest of evaporation alone, M. Boussingault concludes—and his conclusions were confirmed by experiment—that the cracking which occurs after or during continuous heavy rain is the consequence of an increase of volume occasioned by the introduction of water through the skin by means of endosmose.

—— THE *Revue Horticole* strongly recommends *Fuchsia syringæflora*, considered by some as a variety of F. arborescens, as a fine decorative and market plant. It is of vigorous habit, attaining 6 ft. or 7 ft. in height, with sub-elliptic leaves from 3 in. to 6 in. in length, and very numerous flowers, of a beautiful soft rosy tint, arranged in a paniculate bunch, which recalls the inflorescence of the Lilac. F. syringæflora flowers from October till February. The culture is most easy. To have fine plants, it is recommended to plant them out in prepared soil early in the season; to pinch-in freely, so as to obtain well-furnished plants, the last pinching taking place in July or August; and on the approach of frosts to take up the plants, pot them, and place them in a greenhouse, where they will flower about the time stated.

—— MR. H. C. SORBY, the President of the Sheffield Naturalists' Club, stated at a recent conversazione that he had studied the *Changes that had occurred in the Colouring Matters of Leaves and Flowers* during their development from a rudimentary to a perfect state, and the connection between them and the action of light, and had found that there was, apparently, a most remarkable correlation. When more and more developed under the influence of light, coloured compounds were found more and more easily decomposed by the action of light and air, when they were no longer parts of living plants, but dissolved out from them. There was thus, apparently, some condition in living plants which actually reversed these reactions. He had also found that in the more rudimentary state of the leaves of the highest classes, the colouring matters correspond with those found in lower classes, and in the case of the petals of flowers, their more rudimentary condition often corresponded with some other variety, which thus appeared as if due to a naturally arrested development of a particular kind. This principle would perhaps serve to explain the greater prevalence of flowers of particular colours in tropical, or colder regions, and at different elevations. Mr. Sorby is about to extend his inquiries, to determine (what he at present only infers from the indications of his previous experiments) whether light, with a relatively greater amount of the blue rays, might not be relatively more favourable to the cryptogamia than to the flowering plants.

—— SOME improvements in *Flower-pot Covers*, *Blinds*, *Mats*, *&c.*, which require to be rolled, have been introduced by Mr. Spear, of Bury Street, London. He takes strips, fillets, or laths of wood, metal, or other suitable material, and drills a series of small holes through the same to receive the cord or string, which is by preference elastic; while, between every fillet or lath and that next adjoining it, he places beads, balls, or other separating pieces with corresponding holes. Cords or strings are then passed through the holes in the strips, fillets, or laths, and in the beads, balls, or other separating pieces, and an article of ornamental appearance which can be rolled up or curved into any desired form is thus obtained at a small cost. For flower-pot covers, the rows of beads should get gradually smaller as they approach the part that is to come near the bottom of the pot, so that the cover when folded round the pot may partake of a conical form corresponding with that of the pot. Hooks or other fastenings are added at the ends of the cover, to allow of its being fastened round the pot.

—— THE *Double-flowered Chinese Larkspur* (*Delphinium sinense flore-pleno*) is specially referred to by a correspondent of the Irish *Gardeners' Record*, who says:—"A bed of it, during the past summer, was one of the most beautiful objects imaginable, as if a patch of purer and deeper ether than the far-famed Italian skies can boast, were transferred to earth awhile. It is perfectly unaccountable why this plant is not more extensively grown, as it is perfectly hardy, and its cultivation of the easiest. It is a true herbaceous perennial, and may be readily increased in the spring by division; or cuttings taken off when the shoots are but a few inches high will root freely. It also comes very freely from seed, which should be sown in boxes or pans, and kept in a cold pit or frame during the winter. In procuring seed, be careful that the true variety is obtained, and that it has nothing of the 'candelabrum' strain in it. The height of this double-flowered Delphinium is usually from nine to twelve inches."

—— BY the following *Italian Method of Preserving Grapes*, it is said that the clusters can be preserved until Easter, as fresh and palatable as when cut. They are gathered in small quantities on clear, dry days, removing any decayed berries; they are then fumed with benzine, and laid (not in contact) between fine corn-leaves, in drawers or trays, carefully closed against air and dust.

—— The *Vitis æstivalis* is strongly recommended by the French gardeners as a suitable plant for covering arbours or walls, it being especially recommended on account of its vigorous habit, growing freely in all soils and in all exposures, while its very large, deep, shining green leaves are useful for the packing of fruits. There are few Vines whose leaves are broader, consequently more fit for packing purposes, than those of *V. æstivalis*, which, besides being broad, are almost entire.

—— The Americans have introduced a *Silver Occidental Arbor-vitæ (Thuja occidentalis argentea)*, which they name Victoria, and which is described as a curious and beautiful dwarf plant, wholly unlike any hitherto described, being of a fresh green colour, with the branchlets distinctly tipped with white, entirely hardy, and most attractive and pleasing in appearance.

—— In the *Populus angulata tortuosa*, grown by M. Barthère, of Toulouse, the French gardens possess a novelty which, though scarcely to be regarded as an ornamental tree, is one of the most curious and remarkable forms of its species yet known. Its habit is similar to that of *Robinia tortuosa*, thus forming a densely branched, bushy shrub, with angular crooked or flexuous zigzag branches, having the petiolate glabrous leaves rolled in the direction of the mid-rib, and forming a sort of hood or cowl, with an acuminate point.

## Obituary.

—— Mr. John Delany died at Brennanstown, Cabinteely, on March 17, aged 44 years. For twenty years he had occupied the position of steward and gardener to George Pim, Esq., and was well known as a most successful grower of pot-roses, azaleas, pine-apples, and vegetables. The records of the Royal Horticultural Society of Ireland bear testimony to his excellent worth as a practical horticulturist, and the Council of the Society proved their appreciation of his worth by invariably appointing him as Judge, when not himself an exhibitor.

## GARDEN WORK FOR APRIL.

### FLOWERS.

SPRING-flowering plants, which will soon be in great beauty, are well worth every care. A judiciously arranged Spring garden is unquestionably the most satisfactory and interesting amongst the many phases of flower-garden embellishment. Stir the surface of the ground amongst plants that are coming forward, and support *Hyacinth* blooms, &c., with neat stakes, keeping the grass trim by frequent mowings. Should any planting of evergreens yet remain to be done, they should be seen to at once. *Hollies*, *Rhododendrons*, and the various sorts of *American plants*, may be planted during the Spring months; and all recently planted trees and shrubs must be watered. Replant *Cerastium*, and after planting in damp soils and situations, strew the surface of the ground with some dry material, such as broken tiles, which prevents fogging off; when well done, this is one of the most effective band plants we possess. The *Variegated Honeysuckle* is also a most effective edging plant, which should now be planted, as well as *Veronica incana*, *Dactylis*, and many others. Plant out all hardy Perennial plants, wintered in frames. Sow seeds of *Annual*, *Biennial*, and *Perennial plants*, including ornamental *Beet*. Weeds must be kept under, and neatness and order everywhere maintained.

Hardy *Ferns* and *Rock plants* should now be rearranged, filling up vacancies, and surface-dressing with fresh compost, removing also all decayed fronds and protecting litter. The present is the best time to plant Hardy *Yuccas;* a few judiciously disposed groups of these picturesque plants would prove most acceptable in most gardens.

In-Doors.—The Conservatory is liable to become overcrowded, what with the great variety of hard-wooded plants that are now in bloom, and the choicer flowering bulbs. This should always be guarded against, as it not only damages the plants, but vastly impairs the general effect; place the flowers moderately thin, so as to admit of a free interspersion of the nobler foliage plants, which will give a pleasing relief. The permanent plants must have every attention as to watering, surface-dressing with fresh soil, and encouraging such as are thoroughly established with manure-water; while those which have finished blooming require pruning and starting into growth. It frequently happens in the press of work at this season, that they are put aside and overlooked until damaged, or so much retarded as to flower unsatisfactorily. The following season's winter-flowering plants must now be pushed forward, so as to admit of perfect maturation. *Ferns* will be starting, and should be encouraged by syringing the stronger-growing sorts overhead, and sprinkling the floors; but with such as *Cheilanthes*, *Gymnogramma*, *Nothochlœna*, &c., a proper state of humidity must be promoted without syringing overhead, which so completely spoils their appearance, that from this cause alone we very rarely see the real beauty of these charming plants. Shade against hot sun, ventilating freely at the roofs, but avoiding cutting draughts.

Of *Orchids* the potting must be finished as soon as possible. Many sorts will now be growing freely, and must have an increase of heat and moisture both at the root and in the atmosphere. *Calanthes*, those most useful Autumn decorative plants, should now be potted in thoroughly drained pots, using fibry loam, peat, equal parts of dried cow-dung and leaf-soil, and adding charcoal and sand; these ingredients, mixed in about equal proportions, will grow them admirably.

The growth of *Hard-wooded plants* must be encouraged by shutting up early, and damping every available surface. *Epacrises* and soft-wooded *Heaths* which have been cut back start more freely in a genially warm temperature; at the same time, a sturdy habit of growth must be secured, by free ventilation; all recently potted plants must be cautiously watered at the root. Regulate the form of growing plants by pinching back wayward shoots.

*Stove plants* must now be afforded a brisk moist temperature, admitting air in accordance with the external temperature. *Gardenias* that were forced early will derive benefit from being placed in a brisk heat. Attend to the potting and stopping-back of quick-growing plants; stop back *Achimenes* and plant into baskets. *Hoya bella*, *Æschynanthus*, *Torenias*, &c., are also very graceful when grown in baskets. Embrace every opportunity in keeping down insect pests.

In the pits and frames the propagation of bedding plants must be completed as soon as possible, gradually inuring the hardier kinds to full exposure, so as to make room for the more tender occupants; such as are not planted out of the pots, under temporary protection, should have the pots plunged in light material, which will save a vast amount of labour in watering. Guard against cold cutting winds. Prick off seedlings of all kinds, as soon as they are fit to handle. Sow seeds of *Stocks* and *Asters*, and divide and start *Canna* roots. Proceed with the propagation of *Coleus Verschaffeltii* and *C. Verschaffeltii splendens*, which are the best sorts. *Alternantheras* should also be got forward with the utmost despatch, as well as all tender plants required to be increased.—George Westland, *Witley Court.*

### FRUITS.

*Pines:* Plants in fruit require a temperature of about 80°, with an increase of 10° by sun-heat; water freely, and syringe the plants when the house is closed in the afternoon, to keep up the requisite moisture. Water the succession stock if dry, and if all were not shifted last month, no time should be lost in getting them done in the manner before advised; keep the plants close for a few days after potting; syringe them occasionally, but do not give much water at the root till they begin to grow. Avoid at all times a current of air through the pit; the giving back and front air at the same time is most injurious. Attend to the linings of those in dung-pits, and be careful to moderate the bottom-heat, if *Tan* be used.

*Melons:* Keep the linings turned or renewed, so that the bottom-heat does not decline. They will now require more air and water in proportion as heat and light increase. Still continue to cover the frames at night, except fire-heat be used. Thin and stop the shoots, so that the foliage may have full exposure to air and light; avoid shading if possible.

*Peaches and Nectarines:* Keep a steady night temperature of 60° in the early house during the stoning process; proceed with the thinning of the fruit as they may require it; this of course must depend on the condition of the tree, a healthy, vigorous tree being capable of bringing double the quantity of fruit to maturity which could be allotted to one in a weakly condition. Every assistance should be given to the trees at this stage, in the way of watering, top-dressing, and liquid manuring. Tie in and regulate the shoots in the early house, selecting for next season shoots of moderate growth; stop the leading shoot above the fruit, and encourage one from the base, with the exception of the leading branches. Use the syringe frequently to keep the foliage clean. Continue the disbudding and thinning in the later houses, and air all at every favourable occasion.

*Vines:* Proceed with the thinning of the berries in the succession-house, commencing at an early stage after the fruit is set. Keep the shoots tied in and the laterals stopped. Water the inside borders, and maintain a moist atmosphere while the fruit is swelling. See previous directions in regard to airing, &c. Discontinue syringing the early house as soon as the fruit begins to colour. *Vines in Pots*, where the fruit is swelling, should on no account suffer from drought; water liberally with liquid manure, and clear away all useless growth. Young Vines should be pushed on, and now potted into their fruiting pots; use free, turfy loam, mixed with sheep-droppings or cow-dung.

*Cherries:* Use the syringe freely while the fruit is swelling; give also plenty of water at the root, but as soon as the fruit is ripening less moisture is needed, except at the root. At this stage the temperature may be increased. Keep black-fly in check by dipping the shoots in tobacco-water. Give plenty of air and moisture to *Plums*, keep the foliage clean and healthy, and thin the fruit to a moderate crop.

*Strawberries in Pots:* See previous directions. If the foliage is too abundant, it is advisable to thin out some of the leaves, also to clip off the small flowers as soon as the best blossoms have set, leaving eight or ten fruits to a pot. Give plenty of water, and bring more plants under glass for the last crop.

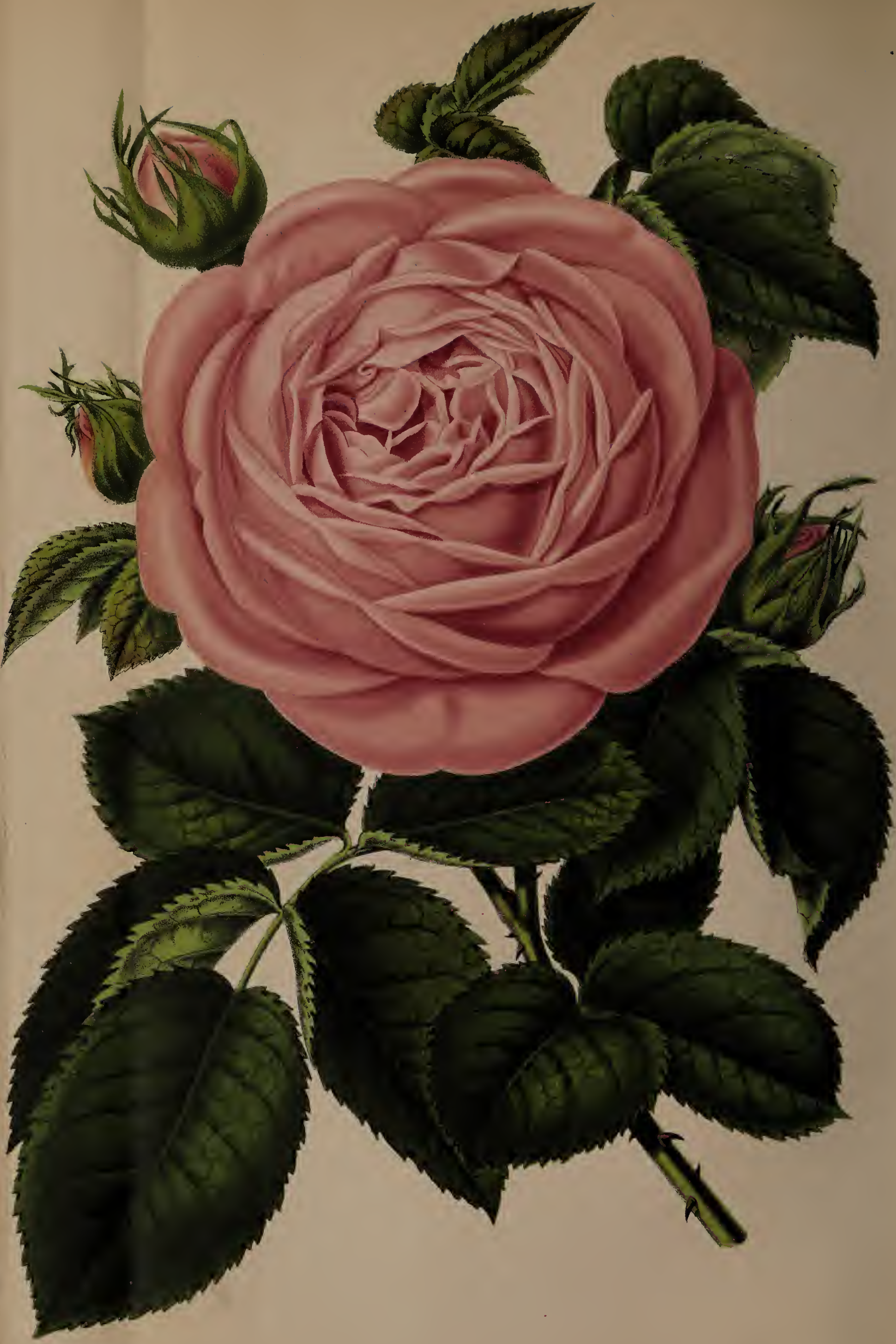
*Figs:* Give plenty of water, especially to those growing in pots, and otherwise assist them with liquid manure. Mulch with rotten manure, and water the inside borders where old-established trees are growing. Keep the night temperature from 60° to 65°, and syringe the trees till the fruit begins to ripen.

*Hardy Fruits:* If previous directions have been carried out, very little remains to be done at present in this department. Still it is a most anxious time for the fruit-grower, and a watchful eye is required to guard the blossoms as far as possible from spring frost. Large trees in the open of course must take their chance, but bush trees, cordons, &c., may be protected by shaking a little Fern or litter among the branches. Hexagon netting or Shaw's Tiffany afford a good protection, and may remain on the trees without injury till the crop is safe. It is now a good time to make new plantations of *Strawberries;* keep the hoe moving among fruiting plants, and prepare for mulching them next month. Watch the first appearance of fly on *Peaches*, and dust with snuff and sulphur, or Pooley's Tobacco-powder; do not disbud at present.—J. POWELL, *Frogmore.*

### VEGETABLES.

Many kinds of seeds will require sowing during this month, either as a first crop or by way of succession. These include such subjects as *Ridge Cucumbers*, *Vegetable Marrows*, *Celery* for the latest supply, Pot Herbs, such as *Sweet* and *Bush Basil*, *Summer Savory*, *Ice Plant*, *Egg Plant*, &c. All such, and other similar tender annuals, must be sown in pans or boxes, and maintained in a frame, or under some kind of structure where a little artificial warmth can be maintained. Sow also in the open border, some time during the earlier part of the month, such subjects as the following, of which successional supplies are requisite:—*Radishes*, *Turnips*, *Beans* (both Broad and Dwarf Kidney), *Peas* (both dwarf and some of the more permanent midsummer kinds, such as Laxton's Alpha, Victoria Marrow, Ne Plus Ultra, and James's Marrow), *Broccolis* (of the Penzance, Grange's, Leamington, Alexandra, and Osborn's late white types), *Kales* or *Borecole* (of the Dwarf Curly, Cottager's, and Asparagus types), *Cabbages* (of the Rosette or Little Pixie types), and *Sprouting Kales* (of the Roseberry, Dalmeny, and Albert types). Permanent sowings must also be made, during the third week of the month, of *Beet*, *Parsnip* (where delayed so late), *Scorzonera*, *Salsafy*, *Asparagus*, *Sea Kale*, *Onions* (for a late crop), *Chicory*, *Dandelion* (Vilmorin's large-leaved), *Lettuce* (of the Paris or Brighton Cos kinds), &c. *Beans*, *Peas*, and late *Cabbages* must be well earthed-up as they grow, and the second well staked, almost by anticipation. *Scarlet-Runner Beans* may be sown for a permanent crop about the 28th; those inclined may do well to make a chance sowing early, as the vegetable is rather a late one, yet such a valuable one withal that we should be well able to afford some little risk in regard to it, in the hopes of reaping a supply a few weeks earlier, the crop being, as is well known, an inexhaustible one, when once it comes into bearing. In cutting *Asparagus*, do so indiscriminately, leaving none of the young weak shoots to remain; give the beds a moderate dressing with salt, if convenient.

Those who possess very limited means may, if they have a frame, now make up a bed with a moderate quantity of fermenting materials, and plant *Cucumbers* thereon, so soon as it has become moderately sweet, which it will do quickly at this advanced season, if abundance of fresh air be permitted to pervade the inside until the necessary results are assured. In a general way, a very limited supply of bottom-heat, say 60°, will be sufficient, provided all the advantage possible be taken of sun-heat when it exists; and save in very ungenial weather, there will now be few days without some little sun. Box up and secure the warm rays when they do prevail therefore, even to allowing the heat within the closed frame—perfectly closed, bear in mind, as this is important—to run up as high as 90°, placing a mat, or a couple of mats, or their equivalent, over the frame during the night, always allowing the least crack for air at one corner of the back of the light, if steam exist within, or a too dense moisture adheres to the leaves in the morning. By so doing the excess of moistures obtains egress, and much injury, or possible injury, is avoided.—WILLIAM EARLEY, *Valentines.*



L. Macfarlane, del.

Chromo. G. Severeyns Brussels.

Rose Peach blossom.

## HYBRID PERPETUAL ROSE PEACH BLOSSOM.

WITH AN ILLUSTRATION.

THIS new Hybrid Perpetual Rose is, as our plate shows, a large, full, and exquisitely shaped flower, the tint being that of a delicate peach-blossom, a colour which we have not hitherto obtained amongst Hybrid Perpetual Roses. The growth of the plant is vigorous, and the constitution hardy; and while from its size, symmetry, and fullness it is a desirable variety for the exhibitor, it is, on account of its colour, hardiness, and freedom of growth and flowering, of undoubted value as a decorative Rose for the garden.

It is, moreover, a veritable English Rose, having been raised by Mr. William Paul, of the Nurseries, Waltham Cross, from English seed, and being one of a very few selected by him from some thousands of seedlings. It has, we are informed, been three years under trial, and proves constant both in character and colour.—T. MOORE.

## THE APPLE: ITS CULTURE & VARIETIES.—CHAP. VII.

I HAVE now only to make a few remarks on a very important point in the culture of this fruit, and conclude with a selected list of varieties suitable for the purposes of the amateur.

Whatever amount of care we may bestow upon the manipulation of the roots and branches, our work cannot be said to be finished. The Apple is peculiarly liable to various insect depredations, which must be guarded against, if the tree is to be preserved healthy and the fruit sound. For the furtherance of these objects, the amateur will do well to give the trees, when in a dormant state, periodical dressings of a solution of Gishurst Compound, six or eight ounces to the gallon of water, or to give it consistency, the solution may have an addition of lime and clay to thicken it, the principal use of which thickening is to indicate, as it dries, any places which may have been passed over without a coating of the compound. Or it may be more convenient to the amateur to make his own composition, which he may do in the following manner:—Mix intimately together 1 lb. of soft-soap and 1 lb. of flowers of sulphur, upon which pour two gallons of boiling water; afterwards add sufficient lime, clay, and soot, in equal quantities, to make it of the consistency of thick whitewash; this will dry of a pleasant neutral tint, and not be unsightly.

The trees should be painted over with one of these compositions from base to apex, taking care to insert the brush well into all crevices between the forks of the branches. In the case of trees infested with American blight, the parts immediately affected should have soft-soap alone, well scrubbed in with a hard brush. This dressing will act as a general preventive against most of the insect enemies of this fruit, and will tend to lessen, but will not wholly prevent, the ravages of those winged depredators, the Apple Moths, as they may come from other parts; they may, however, be very much kept under by a timely removal of all fruits which show signs of having been pierced in a very young state; such fruits are generally deformed, and should be removed at the time of thinning. Early windfalls also should invariably be removed at once, as a preventive, however, rather than a cure, for so long as there are large orchards, so long will there be Apple Moths to pester small growers, however careful they may be in taking precautionary measures. I now proceed to append a short list of proved varieties of apples suitable to meet the amateur's requirements :—

### SIX EARLY DESSERT APPLES.

1. DEVONSHIRE QUARRENDEN : A very handsome apple, of a rich crimson colour, ripens early in August, is a great bearer, and is well adapted for a pyramid.
2. EARLY HARVEST : Rather below medium size ; colour yellow ; ripens end of July or beginning of August.
3. EARLY CROFTON : A very excellent dessert apple, ripens in August ; medium size ; colour pale green, streaked and spotted with red on sunny side.
4. KERRY PIPPIN : A brisk-flavoured, excellent dessert apple, below medium size ; colour pale yellow, marbled with red ; ripe in September.
5. RED ASTRACHAN : Another handsome dessert apple, of a rich crimson colour, and with a delicate bloom ; ripens end of August.
6. SUMMER GOLDEN PIPPIN : Rather small, but a fine-flavoured dessert apple ; ripens end of August.

### SIX GOOD EARLY KITCHEN APPLES.

1. BROWN'S CODLIN.
2. DUTCH CODLIN.
3. HAWTHORNDEN.
4. MANKS CODLIN.
5. LORD SUFFIELD.
6. FROGMORE PROLIFIC.

The above are all proved good sorts of Early Kitchen Apples, too well known to need description. They are all prolific bearers, and well adapted for pyramids.

### SIX GOOD MID-SEASON DESSERT APPLES.

1. ADAMS' PEARMAIN : A medium-sized, handsome-shaped, conical apple, in season from November to February.
2. COX'S ORANGE PIPPIN : One of the best dessert apples grown ; is very handsome, a great bearer, and of fine flavour ; October to February.
3. BLENHEIM ORANGE : Another very handsome and popular apple, having a richly-perfumed flavour ; above medium size ; in season from November to end of March.
4. GOLDEN REINETTE : Rather below medium size, but a handsome, fine-flavoured, dessert Apple ; a great bearer ; October to February.
5. RIBSTON PIPPIN : No collection would be complete without this old favourite ; it is well adapted for espaliers ; October to end of April.
6. MARGIL : Another good old prolific dessert apple, well adapted for pyramid culture ; November to March.

### SIX GOOD MID-SEASON CULINARY APPLES.

1. CELLINI.
2. ALEXANDER.
3. NEW HAWTHORNDEN.
4. WALTHAM ABBEY SEEDLING.
5. COX'S POMONA.
6. YORKSHIRE GREENING.

### Six Good Late Dessert Apples.

1. Court of Wick.
2. Golden Knob.
3. Lord Burghley.
4. Scarlet Nonpareil.
5. Lodgmore Nonpareil.
6. Mannington's Pearmain.

The above are all good late Dessert Apples, in season from January to the end of May; they are very well adapted for espaliers and pyramids.

### Six Good Late Culinary Apples.

1. Dumelow's Seedling.
2. Northern Greening.
3. White Calville.
4. Tower of Glammis.
5. Warner's King.
6. Norfolk Beefing.

In all the above lists I have striven to secure variety, but not sought after novelty. My aim has been to supply a reliable list of sorts, from which the amateur may select such as he requires, without the risk of disappointment in the sorts, some one or other of which may be available for use the whole year round.—John Cox, *Redleaf.*

## RIVERS' EARLY BEATRICE PEACH.

I HAVE this day, April 8, tasted a ripe fruit of this early Peach, grown by Captain Ashby, in the county of Lincoln. The fruit was for the season highly-coloured, and the flavour good. Though small, it is certainly a great addition to the dessert-table at this early period. I cannot say when the house was started, but as a proof of the early properties of this peach, I may add that in the same house, when this was ripe, Royal Georges were only just beginning to take their second swelling. The first dish of one dozen was gathered on March 31. I hear, but I have no authority for stating that Early Beatrice was gathered at Frogmore some time before—it would be highly interesting to know on what date. Perhaps Mr. Jones would oblige the public with this information. —R. Gilbert, *Burghley*, *Stamford.*

## THE SEASON FOR PLANTING EVERGREENS.

I SEE from the letters of various correspondents in the gardening papers, that the best time for planting Evergreens is still a subject of doubt. After all that has been written on the subject, we still find many persons planting large masses of mixed trees, deciduous and evergreen, during the winter and early spring. I have seen immense losses, especially in the case of Evergreens, when the planting was done during February and March, and have my eye upon a piece that has been planted this year during March. Of course it is right and proper that the planting of deciduous trees should be finished before the season of active growth commences, but in the case of evergreens it is very different. After twenty-five years' experience in planting Evergreens, I have come to the conclusion that the six weeks after the first of April are the best for general planting; and if the trees are in a good state at the roots, scarcely a plant will be lost, if the work is properly done. The great difficulty is to prevent evaporation from exhausting the moisture of the plant before new roots are formed to supply the deficiency; and although we have sometimes very trying winds in April, yet upon the whole the root-action seems to be brought about more quickly in spring and early summer. In the case of large trees, I find it much better to ply the engine over the leaves than to deluge the roots, which retards instead of accelerating root-action. Still there may be instances where a good soaking of water at the root will be beneficial.

When there is much planting to be done, I find it a good plan to have all the trees in from the nursery the previous year—providing there is ground to accommodate them—as one can then proceed with the work at the most convenient time; otherwise, it may sometimes happen that large quantities of trees will arrive from the nurseries in the most unfavourable weather for planting. Ground that has been trenched during winter, if at all heavy, does not work well in wet weather; and all ground for fresh plantations should be well broken up some time previous to planting. This, I think, is best done in autumn, when the ground is usually drier than in the winter or spring. If deciduous trees are to be planted, it should, if possible, be done in October and November, and if the weather is favourable, during December, preparation being then made for the Evergreens in late spring, finishing with the Hollies in May. I am aware that September is a safe month for planting Evergreens, but few of us can break up our pleasure-grounds at that season; and in the case of larger plantations, it is not often that the labour can just then be spared, on account of the harvest. I may add that we have been planting trees for the last fortnight, from 12 ft. to 15 ft. high, and have still a considerable quantity to plant during this month and the early part of May.—JOHN CLARK, *Studley Royal.*

## ON POTTING STRAWBERRIES FOR FORCING.

MANY years back I had the privilege of being foreman to Mr. G. McEwen, at Arundel. Now I am sure your readers will agree with me when I say that Mr. McEwen was a great authority on all matters horticultural, but more particularly in Strawberry-culture. I well remember that, in his visits to the young hands at the potting-bench, he used to impress on our minds the desirability of ramming the soil into the pots, and that he was never tired of putting in the dung. But time works wonders, and even while at Arundel, I felt half inclined to think we used too much dung, and grew the plants too gross and big. Then, again, we must bear in mind the differences of climate. Arundel is far in the south, with a fine climate, and the plants generally ripened off well.

I must now for one moment invite attention to McEwen's treatise on the Strawberry, in which he mentions that plants put into heat in November and the early part of December, are precarious, so that the cultivator must always be prepared to lose half of them by their going blind; and in making this statement Mr. McEwen only spoke the truth, as I can bear testimony.

Last season, when potting my forcing Strawberries, I put into execution the idea I had, in this way, long since formed, and potted 800 *Keens' Seedlings* for the early batch, without any dung whatever. Our first lot, consisting of eight dozen, was put into the Peach-house on December 2, and the first fruit was gathered on March 3, and we have gathered daily since that date till now (April 9); but instead of half the plants going blind, we had only eight out of the eight dozen—which appears to me to be a step in the right direction. I should, therefore, advise to pot the early kinds without dung; but with the later kinds, for May and June, to use larger pots and richer soil.—Richard Gilbert, *Burghley.*

## APONOGETON DISTACHYON.

THIS is a pretty little Aquatic from the Cape of Good Hope, whence it was introduced nearly a century ago; still it has never met with general culture. It is hardy enough to grow in a tank outside, but as a plant for the sitting-room window it has few equals. All that it requires is a handful of fibrous loam and sand in the bottom of an inverted bell-glass, and it will grow and flower freely for months together, if it has a change of water weekly. Its pearly wax-like bracts are borne on forked spikes, the whole being covered with an extinguisher-shaped covering when young. The inflorescence is most gratefully perfumed like hawthorn.—F. W. Burbidge.

## DOUBLE DAISIES FOR SPRING BEDDING.

IN the following notes, condensed from the *Gardener's Record*, we have the experience of Mr. W. E. Gumbleton as regards the relative merits of the different varieties of Double Daisy, when used with a view to their effectiveness in the decoration of spring beds or borders. The plants were grown along with choice bulbs in lines and circles, in a border fronting Mr. Gumbleton's conservatory, at Belgrove, Queenstown, Cork:—

Dickson's Crimson Quilled (supplied by Mr. R. Dickson, Erdington, near Birmingham) has proved itself most effective and of first-rate quality for general bedding purposes, the colour being bright and clear, and abundance of bloom being continuously produced.

Little Dandy: An exceedingly free-growing and pretty pink Daisy, making a pleasing contrast with the larger-flowered varieties.

Hen and Chickens: Unfit for this kind of work, as it is one of the latest-flowering of all the Daisies, and does not produce its flowers with any freedom till the middle of April or the beginning of May; it is also too pale and undecided in colour to be effective.

White Queen: A variety which was strongly recommended, but which has proved utterly worthless, showing a large yellow centre.

Crimson King: A very double red Daisy, free-blooming, and producing flowers of good size and substance, of lighter shade than, and distinct from, Dickson's Crimson Quilled. This variety can be purchased in any quantity outside Covent Garden Market at the moderate price of one shilling the dozen plants, and should be in every collection of Daisies.

Henderson's Snowball: Certainly one of the best and most fully and evenly double, if not the best, white Daisy in cultivation, as well as by far the earliest to come into blow; its flowers are of medium size, but produced in great abundance and in regular succession, and are well raised above the foliage, which is not by any means of so vigorous or robust a habit of growth as that of daisies in general; in fact, I should say that, unless in soils and aspects that specially suited it, this variety might prove of a delicate and unsatisfactory constitution, but where it thrives, it would be hard indeed to beat it.

**Double Red-flowered Aucubæfolia**: An exceedingly effective and ornamental Daisy, but, unfortunately, one for which the voracious and night-crawling slug has a peculiar partiality, it being the only variety touched by these animals, while, strange to say, they did not touch the equally conspicuously variegated white-flowered variety growing in the very next clump.

**White-flowered Aucubæfolia, Flower of Spring**: This fine novelty, raised by an amateur florist at Reading, and sent out by Messrs Henderson, of St. John's Wood, is a great and decided acquisition to this class of plants, being of exceedingly free and vigorous habit of growth, and producing in great profusion its pure, white, quilled flowers, which form a very pleasing contrast to the brilliant golden variegation of the foliage.

**Bellis roseo-tincta**, sometimes known as **Pink Beauty**: A most delicate and lovely variety, resembling when the flowers are not quite fully developed, a beautiful Persian Ranunculus, the ground-colour being blush-pink, all the petals being clearly and distinctly tipped with deep rose. Unfortunately, the flower is not quite as fully double as could be wished, many of the flowers, when fully expanded, showing a more or less hollow centre and deficiency of petals. This, I should think, might be remedied by judicious culture or hybridization, by which means the flower might be made to come more evenly, and fully double, while preserving its exquisite delicacy of tint. Still, even though unimproved, it will, on account of its unique and delicate beauty, always commend itself to amateurs who are not very particular.

**Bellis grandiflora bicolor**: A handsome parti-coloured daisy, with alternate petals white and deep crimson, and of immense size and substance when it comes out really well, but unfortunately, not to be relied on for early or regular blooming, for which reason I do not think I should include it in a choice border another year, but should substitute for it an exceedingly pretty deep crimson variety of the Little Dandy recently received.

**Bellis ranunculiflora**: The latest-blooming of all the Daisies known to me, and unfit for use in an early spring border. In colour, this variety is almost exactly similar to the last-named, but the flowers are rather smaller in size, and the habit of growth is by no means so vigorous; it may be useful for later work, either as edgings or clumps.

I have also recently received a single plant of an apparently perfectly distinct and fully-double white Daisy, received by the friend who sent it to me for trial from Messrs. Poulton and Sons, of Edmonton, and named **Queen of the Whites**. If this turns out as good as it at present promises to be, I shall, in all probability, substitute it in my next pattern border for the worthless White Queen. Some of the new **Victoria** Daisies raised by Mr. B. W. Knight, of Battle, Sussex, are very fine indeed, but only a few of these are yet in flower.

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## FERNS FOR THE MILLION.

MANY of our beautiful native Ferns will feel quite at home in situations where flowering plants could not live. Therefore, what is blank space in many gardens may be used to grow Ferns, which would in this way embellish many a dull corner.

The way in which Ferns are *staged* is everything. If they are grown on a flat stage or platform they had better not be grown at all, for as a general rule, they are a one-sided race, and hang out their handsome fronds from the upright face of a rock, or from the chink between stones in a wall. Fortunately, their localities are widely different, some rioting in the burning sun on a limestone rock, others on the mossy trunk of a tree, whilst others, again, as the *Osmunda*, delight in a peat bog with plenty of stagnant moss-water. The great body of the tribe, however, seems to seek shelter, and they may often be found with a veil of Bramble between them and the sun, and some deep ditch or steep hedge-bank between them and the wind. Now, unless we keep this shade and shelter before our eyes, we shall not succeed well with Fern-culture. I am not now going into details as to what kinds should be planted, but only to show what kind of a situation would best suit the plants, and be most enjoyed by the owners at a very trifling cost.

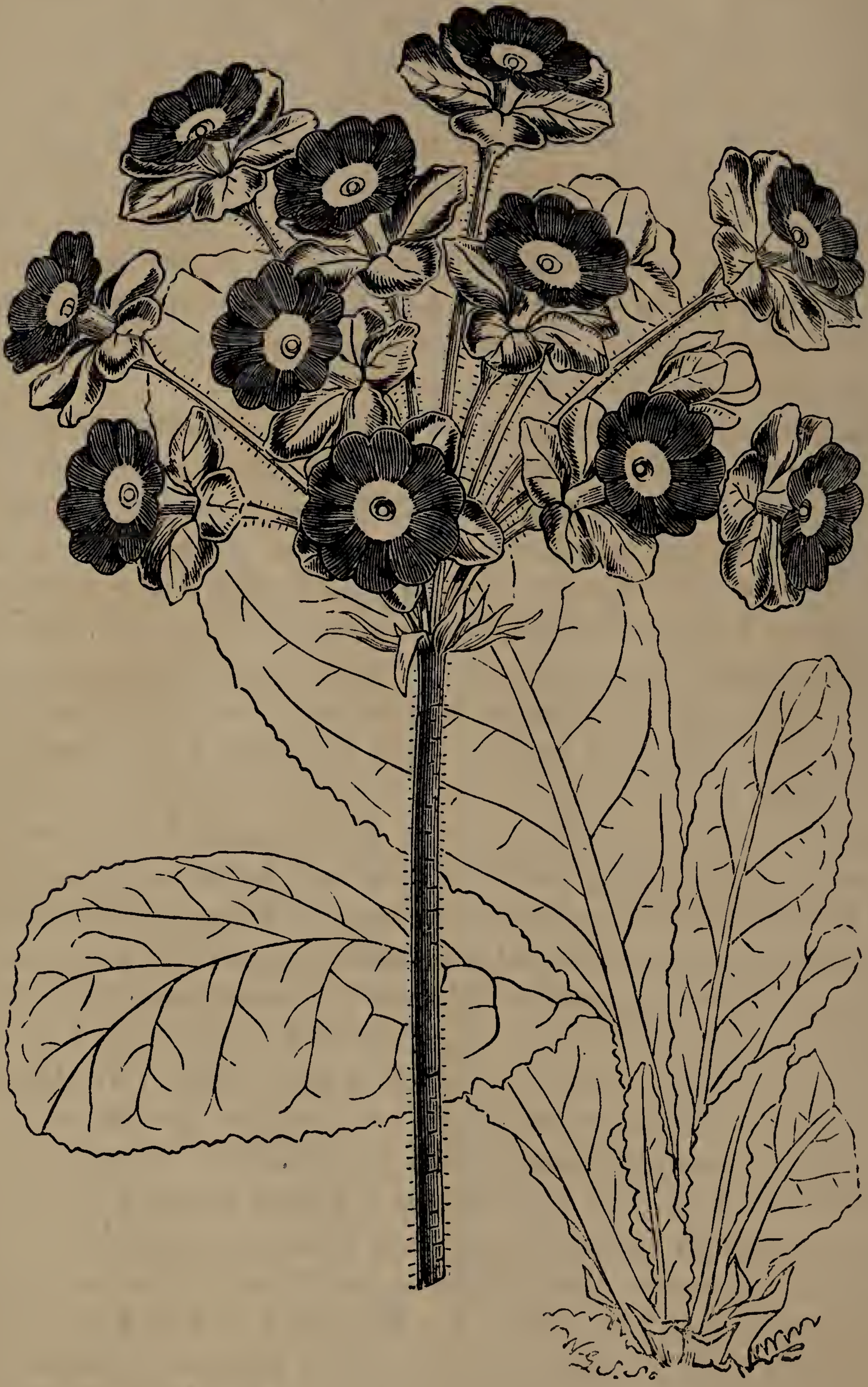
Supposing, then, that we take our plan for the Fernery from the frying-pan. The late Bishop of Exeter took the pattern on his fire-shovel for the plan of his flower-garden, and it was praised, or rather, the Bishop got praised for his good taste ; and reckoning the handle of our frying-pan to represent the stair or steep pathway from the level of the garden down to the pit of the Fernery, and the oval or circular pan to be the chief platform, some 8 ft. or 9 ft. below its surroundings, we shall have a very good model to start with. Of course the earth, sand, gravel, or stones excavated will raise the surroundings more than half, and the whole affair is simply the digging of a large pit, and carefully placing the outcome in the form of a steep stage for plants, adding a garden-seat for visitors, one or two small pools for *Osmunda*, and a rustic bridge of very narrow span over the water, but still leaving a large portion of the area covered with clean, dry gravel, so that several persons could meet there, and rest under shelter from the wind in this well-hole of wild (native) plants.

The secret of planting Ferns is to do it in mud or puddle. If you dig up grown Ferns in the woods, &c., and plant them in rich mud, they will scarcely feel the change ; but it is not only the plants that want wet clay, the building of the Fernery itself needs it as well, for if there be no stones to be had, nor any cheap substitute, the stage must be made of puddled earth or clay, and just made steep enough not to require support, say at an angle of 45°, or 2 ft. flat and 1 ft. rise. Where, however, the materials will admit of steep building, so much the better, as the plants will accommodate themselves to the locality, and hang out from this rubble wall just as they hang out from a ditch-bank in the uncultivated state.

All our native Ferns, with the exception of the common Bracken, may find a place in such a cellar-dwelling as is here described; and it would be good practice for a beginner to try his powers on strong native plants, before he goes to any great expense with rare ones. An old stone quarry, a gravel pit, a cairn of stones, or the like, would be a treasure in this way for manufacture into a Fernery, where the calm, the shade, and the moisture could be secured. A tent made of cheese-cloth, and pitched over a Fern-pit, is a great luxury. The late Bishop Philpott had a bunting-house at Bishopstowe, and the late Mr. Veitch had bunting-houses or tents over his specimens for exhibition. Perhaps the handsomest article in this way that I have ever seen, was the awning over a Tulip bed in the priest's garden at Isleworth ; and I had it from hear-say evidence that it was the property of George Glenny, of floricultural fame. Most flowering plants suffer from want of light when shaded, but Ferns seem to long for this dreamy, sunset sort of life ; and the yellowish colour of the unbleached cheese-cloth is better than any white tent to show off shades of green. Let no one think lightly of our native Ferns until he has seen them at home in their native quarters, and be it known that they are not like Byron's Palm-tree,—

> " That could not leave its place of birth,
> That would not live in other earth."

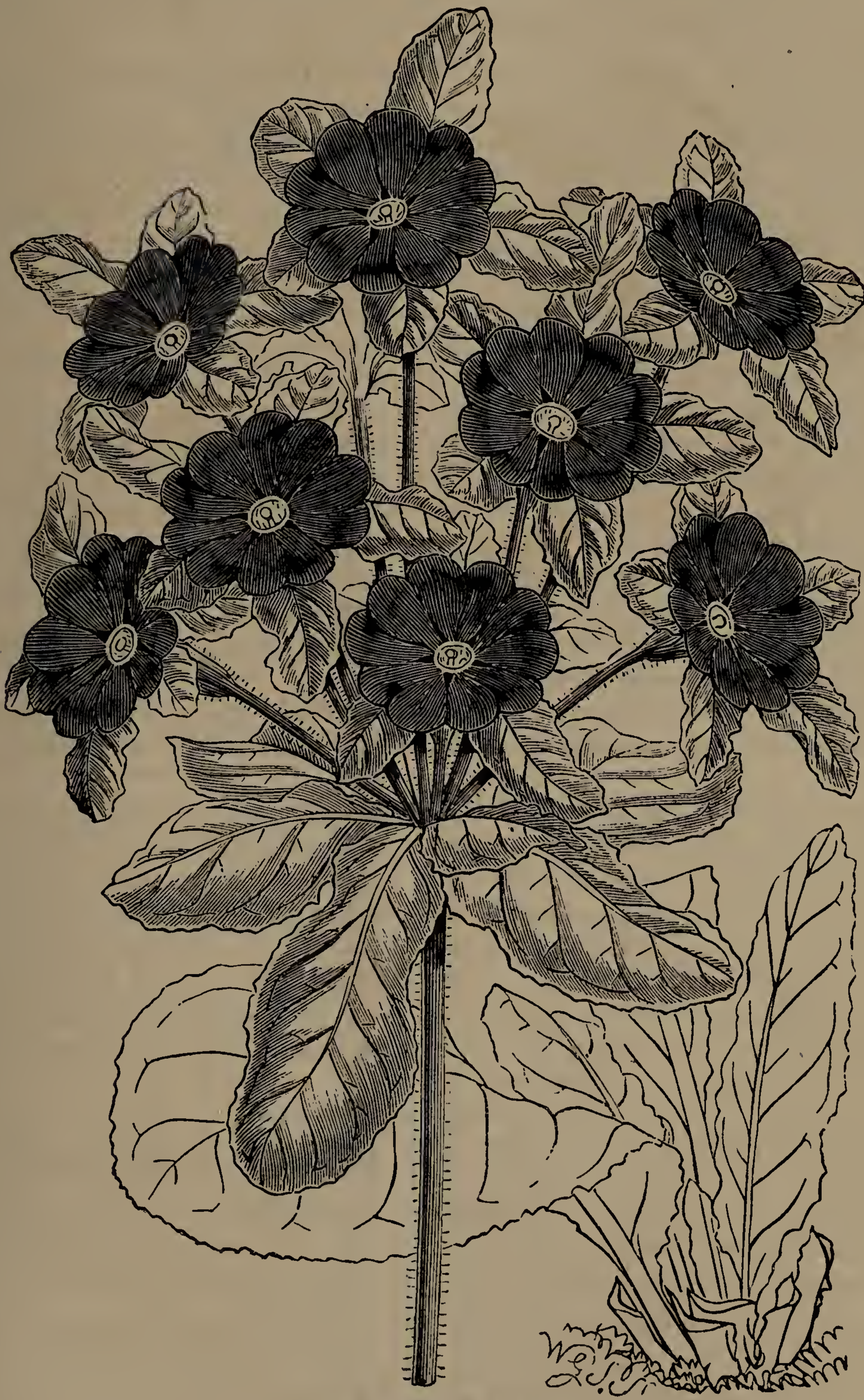
I have taken some hundreds away from a locality a few miles from Manchester, and they have done well treated as here directed.—A. FORSYTH, *Salford.*



## PANTALOON POLYANTHUSES.

IN a very interesting illustrated pamphlet just published, "Philanthos" has given a most interesting, but much too brief, account of the different forms into which the Primrose varies. Some of these varieties are normal, and are generally recognised as distinct plants, *e.g.*, the Cowslip, the

Oxlip, and the Polyanthus; others are abnormal, and bear the curious names of Hose-in-Hose, Pantaloon, and Galligaskin, a variation of the latter being called Jackanapes-on-Horseback. The Hose-in-Hose are those which appear to have two corollas, one springing out of the other, and no calyx—the calyx, in fact, having become corolloid. The Pantaloons are those which have the calyx enlarged and leaf-like, instead of being so changed as to resemble the corolla; and the Galligaskins, are those in which the calyx-segments become developed into larger



JACKANAPES-ON-HORSEBACK.

foliaceous bodies, crisped and curled on the margins. The Jackanapes-on-Horseback is an exaggerated form of this latter, in which the bracts at the base of the umbel also become large and foliaceous. By the courtesy of the author we are enabled to add figures of some of these forms, with which we quote the explanatory remarks on the Pantaloons :—

" This is a term applied by the old florists of two centuries ago to a form of the Hose-in-Hose, 'having green leaves about their blossoms, which are sometimes variegated with the same colours as the flowers they encompass.' This in modern language signifies that the calyx is not an exact fac-simile of the corolla, as in the Hose-in-Hose, but is enlarged, so as to become funnel-shaped, and while partaking of the colour of the corolla, it is variegated with green stripes. They are sometimes called by country people *Jack-in-the-Box.* Of these I have a great variety, ranging in colour from pale lemon-yellow to deep rich yellow, and from yellow stained with red, through all shades of red to dark maroon.

" My original plants of the Pantaloon form I got from Mr. Webb, of Calcot, near Reading, under the name of *Garibaldi.* This gentleman is well known as a great cultivator of the Polyanthus, the Primrose, and the Cowslip, and very kindly presented me with all the varieties of Pantaloon in his collection. These were yellow of various shades, brownish-red, and dark red. Since then I have, by careful crossing, succeeded in raising a great variety with much larger flowers, and embracing a great range of colour, from pale lemon to deep yellow, and from pale brick to the richest maroon. Last year I raised a very fine variety produced by a cross from one of the large-flowered Polyanthus, as the corolla is of unusually large size, and the calyx equally so.

" There is a curious variety of Pantaloon, raised by Mr. I. Anderson-Henry, which has large foliaceous bracts, the same as in old Parkinson's Jackanapes-on-Horseback.

" A bed of Pantaloons is one of the gayest sights in the spring and early-summer flower-garden, and their fragrance is so powerful it may be scented at a distance. There is no doubt that the Pantaloons come originally from the Cowslip, for when the seed is sown, a considerable per-centage of the plants produced are the common Cowslip, differing only in colour. I have, however, a fine form of the Pantaloon which is a large-flowered deep crimson Primrose, and is very gay in the flower-border in spring. This is met with in the cottage gardens of East Sussex and some parts of Kent, and as it is a luxuriant grower and free bloomer, it is pretty widely distributed."

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## PARASITIC FUNGI ON SYCAMORE LEAVES, ETC.

SINCE my paper on this subject (1873, p. 228) was written, I have observed that the young leaves of the Sycamore become more or less blotched with the *Rhytisma acerinum*, according to the quantity of old spotted ones which lie beneath the trees in winter; likewise, that the spots begin to appear about the middle of May, each of them consisting of several dark specks, which grow together and form the larger blotches. The Rev. M. J. Berkeley in his note observes " that the black spots may still be found in quantities on the leaves in spring; the waved lines then open, and clouds of spores are given out from the leaves." This is noteworthy, because it shows clearly how those parasitic fungi are propagated which affect the leaves of plants, and are erroneously called blights.

For instance, the dark spots common on Rose-leaves are due to a parasitic fungus called *Asteroma rosœ*, which often causes them to fall off at Midsummer. The spores seem to be preserved in the spots on the membranes of the decayed leaves until spring, when they open and give out the spores in the same way as those of the Sycamore blotches. Perhaps the best remedy for all such pests is to remove and burn the decayed leaves, and also a little of the surface-soil from under the trees and bushes.

In the case of the Vine mildew, the spores lie torpid during winter in the dark spots or marks on the previous season's shoots which have been affected, and then renew the pest. When the leaves and tender shoots are attacked, the prescribed remedies [sulphur excepted] are of little avail, especially when applied by unskilful hands; the safest and best remedy is that of painting the vines after they are pruned with a strong mixture of nearly equal proportions of lime, soot, sulphur, and soap; after pruning, it is desirable to pick up even the smallest twigs and burn them, because they may contain spores which may vegetate in spring, and thus affect the vines afresh. I have, however, no faith in the opinion that the kind of mildew in question will grow on dead wood, nor even on the roots of trees, as some other kinds of fungus do. Lately when renewing an old vine border, I found the roots partly decayed, and covered with fungus-spawn, which brought to my mind the erroneous belief that mildew on vines proceeds from the roots. To test this, I put some of the spawn into a box among fresh soil, and from it I had a crop of toadstools!—J. WIGHTON, *Cossey Park.*

## EARLY PEACHES.

IT is very interesting to read the remarks of Mr. Radcliffe, on both the early and late Peaches which were raised by Mr. Rivers, because his experience gained at Okeford-Fitzpaine is totally different from that of the veteran grower at Sawbridgeworth. I have not grown *Early Louise*, but *Early Beatrice* and *Early Rivers* have borne crops of fruit at Loxford Hall for at least five seasons. They are both acquisitions for their earliness, the fruit is only of medium size, but ripens at least three weeks before Early York. *Early Beatrice* is a few days earlier than Early Rivers, and is hardier withal, and the fruit keeps better after it is ripe than does that of Early Rivers.

I can testify from experience that these early Peaches are very valuable for Orchard-house culture, and no doubt they will be equally valuable for walls. One desirable quality which pertains to the seedlings raised by Mr. Rivers is that they nearly all set their fruit freely, which is a very important consideration. What would be very desirable now, would be an Early Peach to ripen with Early Beatrice, and with fruit of the same quality and size as Royal George. We also require an early Nectarine. *Hunt's Tawny* is of fair size, but not quite second-rate as regards flavour. A much better Nectarine, larger and of superior flavour, is a seedling, or rather, I believe, a sport, from one of Mr. Rivers' Early Peaches, named *Lord Napier*. I had a good crop of this from a pot-tree last season, and except that fine late Nectarine, *Victoria*, and that best of orange-fleshed Nectarines, *Pine-apple*, it is certainly the best of the Sawbridgeworth selection.

The Peaches and Nectarines seem to have set freely in the orchard-house this year, as usual. We have not had to bewail the loss of a full crop since the house was built. The house is warmed with four rows of hot-water pipes, and the heat can be turned on at any time, but this is seldom necessary except when the trees are in blossom, and then it is necessary should there be a prospect of severe frost, or continued dull cold weather, which is the worst condition of things. At such a time, the pipes ought to be warmed in the day-time, to raise the temperature. These Early Peaches and Lord Napier Nectarine are also to be recommended to be grown in pots, and placed in any suitable forcing-house, where they can receive a fair share of sunshine. I have had good crops from trees placed against the back wall of a Pine-house. They could be placed in a Peach-house if the permanent trees did not overshadow them too much, and would give a few dishes before the trained trees were ready. The quality of the fruit is not criticised very severely, if it is the first dish of the season.—J. DOUGLAS, *Loxford Hall Gardens*, *Ilford.*

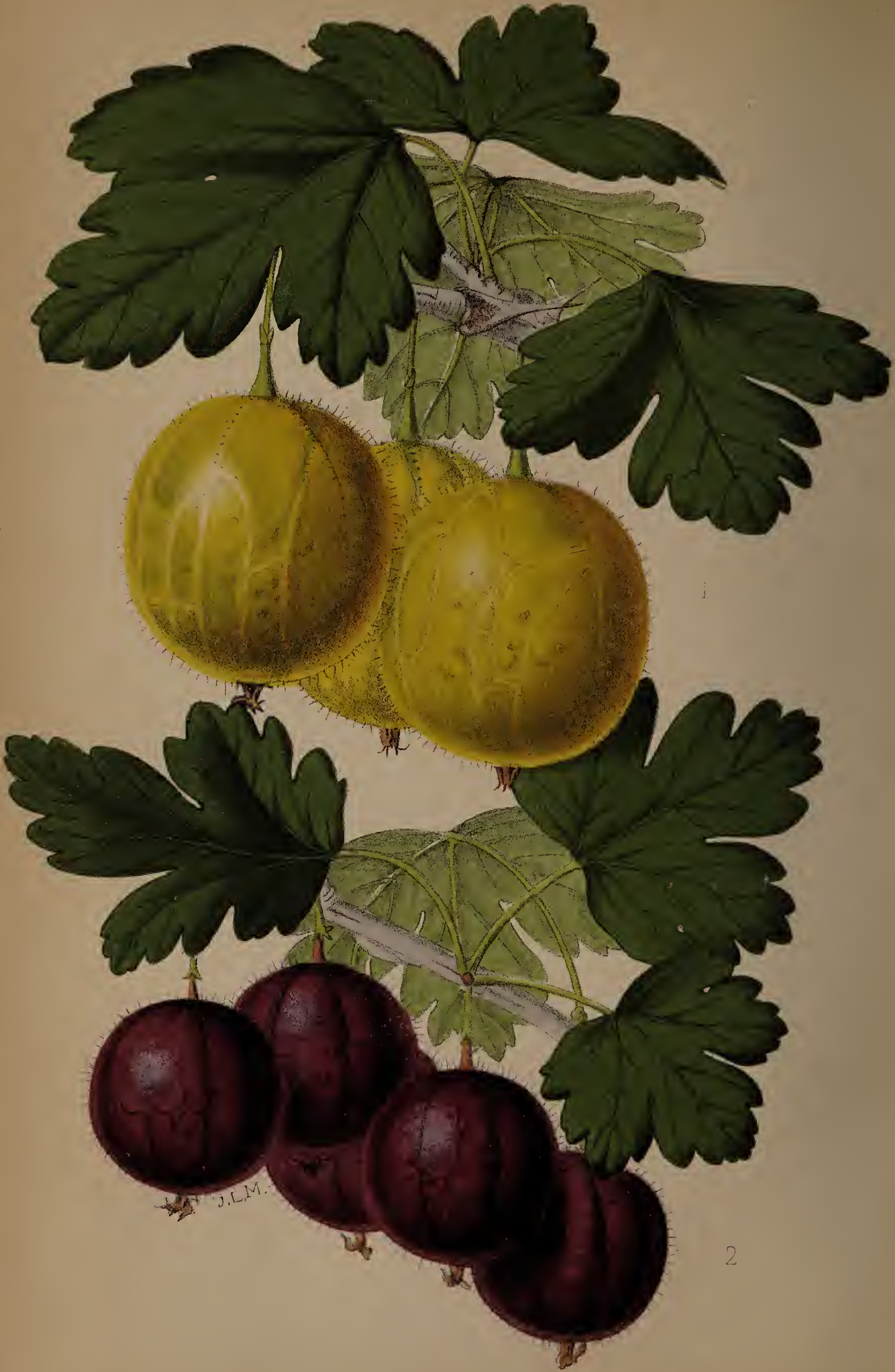
## LILAC DR. LINDLEY.

THIS is by far the best addition which has been made of late years to our hardy forcing shrubs. We hear and see a good deal of the French productions in the way of white Lilac, but their plants are large before they are fit for their method of forcing. Here, however, we have a sort that will in a short time supersede that, with all persons who require to force, since it sets its buds on small plants, and opens freely. We have some plants 18 in. high, with a dozen clusters of bloom, and if forced in a shady house, it comes a good white. When it is more plentiful, and the plants get up to, say, 3 ft. or so in height, there will be no more showy plant for a greenhouse.

A good deal more has been made of the French practice of forcing white Lilac than it deserves. In fact, if a demand were to spring up for it in our markets, a good supply would soon follow, because if the tops are cut off, and put in with bloom-buds well set and ripened, they will push their bloom as fine and as good as whole plants, supposing always that they are forced in some sort of dark house, say a cellar-like mushroom-house.—J. F., *Cliveden.*

## NEW PRIMROSES.

COULD we but get the details of crosses made with a view of reaching certain results frequently recorded, the information thus obtained would, in all probability, throw considerable light on the interesting question of the relative influence of the pollen and seed-bearing parents, as seen in the progeny obtained from them. I have been very successful in a cross made between what we have now in cultivation as *Primula altaica*, which is said not to be the true altaica, but simply a lilac-coloured common primrose, and the fine



GOOSEBERRIES

Macfarlane del.

1. CATHERINA. 2. HENSON'S SEEDLING

crimson variety known as *P. vulgaris auriculæflora*. *P. altaica* was the seed-parent, and it is a large and rather loose, unattractive flower. What I have may be a seedling only, and it is pin-eyed. *P. auriculæflora* is of fine form, has a thrum eye, and is of a brilliant hue of maroon-crimson. This was the pollen-parent. About six of the seedlings bloomed this season ; all have the foliage of the seed-parent, but all are much deeper in colour, varying from soft mauve to a fine hue of rosy-purple. The colour of the pollen-parent here manifests itself. The flowers are all large in size, stout, and with one exception, thrum-eyed. Here, again, the fine quality of the pollen-parent asserts itself. It is a remarkable break, and by crossing on these again some of the finer types, I hope to get even more satisfactory results. The seed-parent is seen in the foliage, the influence of the pollen-parent most unmistakably in the flowers.—R. DEAN, *Ealing*.

## DESSERT GOOSEBERRIES.

### WITH AN ILLUSTRATION.

ONE of the varieties of Gooseberry represented in the accompanying plate, CATHERINA (fig. 1), was obligingly sent to us last season, with many others of excellent quality, by Mr. C. Leicester, of Macclesfield. It will be seen from our figure, which is a true portrait, that it is of large size and very handsome appearance ; it belongs to the class of hairy yellows, and being possessed of a good flavour, it is in every way deserving of cultivation for its quality as a dessert fruit, as well as for its merits as a favourite exhibition kind.

HENSON'S SEEDLING (fig. 2) is a novelty brought before the Royal Horticultural Society last year, by Mr. Henson, of Newark, near Peterborough, when it was found to be of exceedingly good quality, and was awarded a First-class Certificate as a new and distinct variety. It is stated to be a chance seedling, having been originally taken from a hedge in the neighbourhood of Peterborough, and not a garden-raised sort. However this may be, it is a finely-flavoured variety, well worthy of cultivation as a dessert fruit, and though not large enough to rank amongst the show kinds, is quite large enough for general purposes. It belongs to the hairy-red section.

## ROSES AND ROSE-CULTURE.

### CHAPTER XX.—SELECTIONS OF VARIETIES SUITABLE FOR VARIOUS PURPOSES.

THERE is a difficulty in making selections of Roses even for special purposes, because so many gardens have their peculiarities of soil and climate which require to be taken into account, in order that the best possible selection may be made. With those who are not well acquainted with Roses and the conditions of their successful cultivation, it is the best plan to appeal to some one who is well informed on the subject, stating all the conditions of soil and climate, and the special objects the cultivator has in view. By this means the end desiderated may be surely and completely attained.

The following lists, then, should be taken, as of a general character, as the best only for such gardens—which are numerous—where no special conditions of soil and climate exist. For lists of the best Tea-scented Roses see FLORIST, 1871, page 244, and 1872, page 28 :—

### One Hundred Good Show Roses, Dwarfs or Standards.

*Moss.*

Crested.

*Hybrid Chinese.*

Charles Lawson.

*Hybrid Perpetuals.*

Abel Grand.
Alfred Colomb.
André Dunand.
Antoine Ducher.
Baron Chaurand.
Beauty of Waltham.
Bessie Johnson.
Black Prince.
Camille Bernardin.
Caroline de Sansal.
Centifolia rosea.
Charles Lefebvre.
Claude Levet.
Comte Raimbaud.
Comtesse de Chabrillant.
Countess of Oxford.
Devienne Lamy.
Dr. Andry.
Duc de Rohan.
Duchesse de Caylus.
Duke of Edinburgh.
Dupuy Jamain.
Edward Morren.
Elie Morel.
Emilie Hausburg.
Etienne Levet.
Exposition de Brie.
Felix Genero.
Ferdinand de Lesseps.
Fisher Holmes.
François Michelon.
François Treyve.
General Jacqueminot.
Horace Vernet.
Jean Lambert.
John Hopper.
John Keynes.
La Duchesse de Morny.
La France.
Lælia.
Lord Macaulay.
Louis Van Houtte.
Lyonnais.
Madame Alice Dureau.
Madame C. Crapelet.
Madame Chas. Wood.
Madame Chirard.
Madame C. Joigneaux.
Madame Creyton.
Madame Fillion.
Madame Geo. Schwartz.
Madame Lacharme.
Madame la Baronne de Rothschild.
Madame Victor Verdier.
Madame Vidot.
Madlle. Annie Wood.
Madlle. Bonnaire.
Madlle. Eugénie Verdier.
Madlle. Marie Rady.
Madlle. Thérèse Levet.
Marguerite de St. Amand.
Marie Baumann.
Marquise de Castellane.
Maurice Bernardin.
Monsieur Noman.
Paul Neron.
Pierre Notting.
Prince Camille de Rohan.
Princess Beatrice.
Richard Wallace.
Senateur Vaisse.
Souvenir de Mons. Boll.
Victor Verdier.
Xavier Olibo.

*Bourbon.*

Souvenir de Malmaison.

*Noisette.*

Céline Forestier.
Cloth of Gold.
Madame Caroline Kuster.

*Tea-scented.*

Alba rosea.
Belle Lyonnaise.
Catherine Mermet.
Climbing Devoniensis.
Gloire de Dijon.
Jean Pernet.
Madame Margottin.
Madame Villermoz.
Madlle. Marie Arnaud.
Maréchal Niel.
Marie Ducher.
Marie Van Houtte.
Niphetos.
Perfection de Monplaisir.
Perle de Lyon.
Rubens.
Souvenir de Paul Neron.
Souvenir d'Elise Vardon.
Souvenir d'un Ami.
Triomphe de Guillot fils.

### One Hundred Good Garden Roses, Dwarfs or Standards.

*Provence.*

Cabbage or Common.
White Provence.

*Moss.*

Baron de Wassenäër.
Crested.
Common.
Gloire des Mousseuses.
Lanei.
Reine Blanche.
White Bath.

*Damask.*

Madame Soetmans.

*Alba.*

Félicité Parmentier.

*French or Gallica.*

Œillet Parfait.
Perle des Panachès.

*Hybrid Chinese.*

Charles Lawson.
Coupe d'Hébé.
Madame Plantier.
Paul Ricaut.

*Austrian.*

Persian Yellow.

*Perpetual Moss.*

Madame Moreau.
Madame William Paul.
Perpetual White Moss.
Salet.

*Hybrid Perpetuals.*

Abbé Brammerel.
Alfred Colomb.
Anna Alexieff.
Antoine Ducher.
Auguste Rigotard.
Baron de Bonstetten.
Beauty of Waltham.
Boule de Neige.
Centifolia rosea.
Charles Lefebvre.
Comtesse de Chabrillant.
Countess of Oxford.
Dr. Andry.
Duchesse de Caylus.
Duke of Edinburgh.
Duke of Wellington.
Dupuy Jamain.
Elie Morel.
Elizabeth Vigneron.
Felix Genero.
Firebrand.
Fisher Holmes.
General Jacqueminot.
Jean Goujon.
Jean Lambert.
John Hopper.
Jules Margottin.
Lady Suffield.
La Brillante.
La France.
Lord Macaulay.
Louis Van Houtte.
Louise Darzens.
Mme. Alfred de Rougemont.
Madame Boutin.
Madame Chas. Wood.
Madame C. Joigneaux.
Madame Emile Boyau.

Madame la Baronne de Rothschild.
Madame Rivers.
Madame Victor Verdier.
Madlle. Annie Wood.
Madlle. Eugénie Verdier.
Madlle. Marie Rady.
Madlle. Thérèse Levet.
Marie Baumann.
Marquise de Castellane.
Maurice Bernardin.
Paul Neron.
President Thiers.
Prince Camille de Rohan.
Xavier Olibo.
Prince de Portia.

Princess Beatrice.
Princess Christian.
Princess of Wales.
Senateur Vaisse.
Thorin.
Victor Verdier.

*Bourbon Perpetual.*

Baron Gonella.
Comtesse Barbantanne.
Madame Gustave Bonnet.
Michel Bonnet.

*Bourbon.*

Souvenir de Malmaison.

*Noisette.*

Celine Forestier.

*China.*

Mrs. Bosanquet.

*Tea-scented.*

Adrienne Christophle.
Alba Rosea.
Belle Lyonnaise.
Gloire de Dijon.
Homer.
Madame Falcot.
Madame Margottin.
Madame Villermoz.
Marie Van Houtte.
Safrano.
Sombreuil.
Souvenir d'un Ami.

### THIRTY-TWO ROSES FOR TOWN GARDENS.

Madame Hardy.
Madame Soetmans.
Brennus.
Charles Duval.
Charles Lawson.
Chenedolé.
Coupe d'Hébé.
Madame Plantier.
Alphonse Damaizin.
Anna Alexieff.
Beauty of Waltham.

Charles Lefebvre.
Dr. Andry.
Duchess of Sutherland.
Duke of Edinburgh.
Elizabeth Vigneron.
General Jacqueminot.
Glory of Waltham.
Horace Vernet.
John Hopper.
Jules Margottin.
Madame Clemence Joigneaux.

Madame Victor Verdier.
Maréchal Vaillant.
Prince Camille de Rohan.
Prince de Joinville.
Princess of Wales.
Souvenir de la Reine d'Angleterre.
Aimée Vibert.
Mrs. Bosanquet.
Sombreuil.
Gloire de Dijon.

### TWELVE WEEPING ROSES.

Fulgens.
General Jacqueminot (Hybrid Chinese).
Madame Plantier.
Vivid.

Ruga.
Félicité perpétué.
Laure Davoust.
Céline Forestier.

Desprez à fleur jaune
Ophirie.
Gloire de Dijon.
Maréchal Niel.

### TWENTY-FOUR PILLAR ROSES SUITABLE FOR FORMING PILLARS FROM 8 FT. TO 10 FT. HIGH.

Princess Adelaide (Moss).
Lanei.
Madame Soetmans.
Brennus.
Charles Lawson.
Chenedolé.
Madame Plantier.
Paul Verdier.
Vivid.

Anna Alexieff.
Baron Chaurand.
Duke of Edinburgh.
Elizabeth Vigneron.
General de Lamartinière.
Glory of Waltham.
Madame C. Crapelet.
Madame Jacquier.

Marquise de Gibot.
Marquise de Ligneris.
Perfection de Lyon.
Princess Louise Victoria.
Souvenir de la Reine d'Angleterre.
Climbing Aimée Vibert.
Gloire de Dijon.

### TWENTY-FOUR CLIMBING ROSES FOR TRELLISES, ARCADES, AND WALLS, THE PLANTS GROWING FROM 20 FT. TO 40 FT. IN HEIGHT.

Laure Davoust.
Félicité perpétué.
Myrianthes renoncule.
Ruga.
White Banksia (Wall).
Yellow Banksia (Wall).
Blairii No. 2.
Céline Forestier.

Desprez à fleur jaune.
Cloth of Gold (Wall).
Ophirie.
Solfaterre (Wall).
Belle de Bordeaux.
Belle Lyonnaise.
Climbing Devonienis.
Gloire de Dijon.

Madame Levet.
Madame Trifle.
Maréchal Niel (Wall).
Triomphe de Guillot fils.
Brennus.
Charles Lawson.
Chenedolé.
Vivid.

### ONE HUNDRED POT-ROSES.

*Hybrid Chinese.*

Charles Lawson.
Paul Ricaut.

*Hybrid Perpetuals.*

Alba mutabilis.
Alfred Colomb.
Alphonse Damaizin.
Anna Alexieff.

Antoine Ducher.
Auguste Rigotard.
Baron Adolphe de Rothschild.
Beauty of Waltham.
Bessie Johnson.
Camille Bernardin.
Caroline de Sansal.
Centifolia rosea.

Charles Lefebvre.
Claude Levet.
Cœur de Lion.
Comte Raimbaud.
Comtesse de Chabrillant.
Countess of Oxford.
Devienne Lamy.
Dr. Andry.

Duchesse de Caylus.
Duke of Edinburgh.
Duke of Wellington.
Dupuy Jamain.
Edward Morren.
Elie Morel.
Etienne Levet.
Felix Genero.
Ferdinand de Lesseps.
Fisher Holmes.
François Fontaine.
François Michelon.
François Treyve.
General Jacqueminot.
Glory of Waltham.
Horace Vernet.
John Hopper.
Jules Margottin.
La France.
Lælia.
Louis Van Houtte.
Lyonnais.
Mme. Alfred de Rougemont.
Mme. Alice Dureau.
Madame Chas. Wood.
Madame C. Joigneaux.
Madame Fillion.
Mme. la Baronne de Rothschild.
Madame Lacharme.
Madame Victor Verdier.
Madlle. Annie Wood.
Madlle. Eugénie Verdier.
Madlle. Marie Rady.
Madlle. Marguerite Dombrain.
Madlle. Thérèse Levet.
Marguerite de St. Amand.
Marie Baumann.
Marquise de Castellane.
Marquise de Mortemarte.
Maurice Bernardin.
Paul Neron.
Paul Verdier.
Pierre Notting.
Princess Beatrice.
Princess Christian.
Princess Louise Victoria.
Princess Mary of Cambridge.
Richard Wallace.
Senateur Vaisse.
Souvenir de Mons. Boll.
Victor Verdier.
Xavier Olibo.

*Bourbon Perpetual.*

Michel Bonnet.

*Bourbon.*

Souvenir de Malmaison.

*Noisette.*

Céline Forestier.

*Tea-scented.*

Alba rosea.
Catherine Mermet.
Devoniensis.
Gloire de Dijon.
Jean Pernet.
Madame Camille.
Madame Falcot.
Madame de St. Joseph.
Madame Jules Margottin.
Madame Margottin.
Madame Villermoz.
Madlle. Cecil Berthod.
Maréchal Niel.
Marie Ducher.
Marie Van Houtte.
Monsieur Furtado.
Niphetos.
Perfection de Montplaisir.
President.
Rubens.
Souvenir d'Elise Vardon.
Souvenir de Paul Neron.
Souvenir d'un Ami.

### OLD ROSES THAT SHOULD NOT BE LOST SIGHT OF.

Cabbage or Common Provence.
Crested Provence.
White Provence.
De Meaux Miniature Provence.
Old or Common Moss.
Pompon Moss.
White Moss.
Maiden's Blush (Alba).
Painted Damask.
Tuscany.
Rosa Mundi.
Village Maid.
Yellow Austrian.
Copper Austrian.
Crimson Boursault.
Single Macartney.
Scarlet Four Seasons.
Old China or Monthly.
Yellow Tea-scented (Thé Jaune).
Lawrenceana or Miniature China.

### NEW ROSES FROM FRANCE NOT YET PROVED IN ENGLAND.

Adéle Bourdeau (Bourbon).
Albert Payé (H.P.).
Antoine Castel (H.P.).
Aureus (Tea).
Baronne de Vittat (H.P.).
Bouquet de Vierge (Bourbon).
Captain Christy (H.P.).
Catinat (H.P.).
Célestine Pourreaux (H.P.).
Claire Carnot (Noisette).
Comtesse de Brosson (H.P.).
Comtesse de Maussac (H.P.).
Deuil de Paul Fontaine (P.M.).
Docteur Brechemier (H.P.).
Docteur Wilhelm Neubert (H.P.).
Duc de Nassau (H.P.).
Duchesse d'Harcourt (H.P.).
Ernest Herger (H.P.).
Etienne Dubois (H.P.).
Etienne Dupuy (H.P.).
Eugène Delamare (Bourbon).
Eugénie Wilhelm (H.P.).
Francisque Barillot (H.P.).
François Courtin (H.P.).
François Dugommier (Bourbon).
Gabrielle Martel (Tea).
Général Dumouriez (H.P.).
Helvetia (Tea).
Hortense Mignard, or Lucie Baltet (H.P.).
James Watt (H.P.).
Jean Dalmais (H.P.).
John Harrison (H.P.).
Kleber (H.P.).
La Florifère (H.P.).
La Liberation (Bourbon).
Le Bignonia (Tea).
Louis Brassac (H.P.).
Madame Albert Fitler (H.P.).
Madame Bernutz (H.P.).
Madame Delaville (Tea).
Madame Desbordeaux (H.P.).
Madame Deseilligny (Tea).
Madame Guyot de Villeneuve (H.P.).
Madame Hunebelle (H.P.).
Madame Landeau (P. Moss).
Madame Louis Lévêque (H.P.).
Madame Marie Finger (H.P.).
Madame Nachury (H.P.).
Madame Rival Verne (H.P.).
Madame Saison Lierval (H.P.).
Madame Thiers (Bourbon).
Mdlle. Antonia Decarli (Tea).
Mademoiselle Dumaine (H.P.).
Marguerite Jamain (H.P.).
Marguerite Lartay (Bourbon).
Maria Theresa (H.P.).
Marie Duncan (H.P.).
Miller-Hayes (H.P.).
Olga Marix (H.P.).
Ophelia (Tea).
Panachée Langroise (H.P.).
Pauline Talabot (H.P.).
Perfection des Blanches (Hybrid Noisette).
Philiberte Pellet (H.P.).
President Hardy (H.P.).
Prince Paul Demidoff (H.P.).
Sanglant (China).
Souvenir de Madame Alexis Michaut (H.P.).
Souvenir de Spa (H.P.).
Theodore Buchetet (H.P.).
Thomas Mills (H.P.).
Triomphe des Rosomènes (H.P.).
Triomphe de Toulouse (H.P.).

### TWENTY-FOUR SEED-BEARING H.P. ROSES.

Alfred Colomb.
Antonine Verdier.
Baron de Bonstetten.
Beauty of Waltham.
Dr. Andry.
Duke of Edinburgh.
Dupuy Jamain.
Fisher Holmes.
General Jacqueminot.
Glory of Waltham.
John Hopper.
Jules Margottin.
Lady Suffield.
Madame Chas. Crapelet.
Madame Victor Verdier.
Madlle. Annie Wood.
Madlle. Eugénie Verdier.
Madlle. Thérèse Levet.
Marie Baumann.
Prince Camille de Rohan.
Souvenir de Dr. Jamain.
Thorin.
Victor Verdier.
William Jesse.

### ROSES RAISED OR INTRODUCED BY ENGLISH ROSE-GROWERS.

**MR. WILLIAM PAUL.**
Beauty of Waltham.
Black Prince.
Cœur de Lion.
Diana.
Dr. Lindley.
Elizabeth Vigneron.
Firebrand.
Glory of Waltham.
Lady Suffield.
Lord Herbert.
Lord Macaulay.
Madame Emile Boyau.
Peach Blossom.
President.
Prince Albert.
Prince Leopold.
Princess Alice.
Princess Beatrice.
Princess Christian.
Princess of Wales.
Queen Victoria.
Queen of Waltham.
Red Rover.
St. George.
Star of Waltham.
Virgil.
Vivid.

**MESSRS. PAUL & SON.**
Cheshunt Hybrid.
Climbing Victor Verdier.
Duke of Edinburgh.
Earl of Eldon.
Lord Clyde.
Prince of Wales.
Princess Mary of Cambridge.
Reynolds Hole.
Strong i' th' Arm.

**MR. CRANSTON.**
King's Acre.

**MR. CURTIS.**
Bessie Johnson.
Climbing Aimée Vibert.
Climbing Devoniensis.

**MR. STANDISH.**
André Leroy.
Eugène Appert.
Rev. H. Dombrain.
Reynolds Hole.

**MESSRS. WOOD & SON.**
Duchess of Norfolk.

**MR. WALKER.**
Beauty of Thame.

**MESSRS. LUCOMBE & CO.**
Devoniensis.

**MR. T. LAXTON.**
Annie Laxton.
Empress of India.
Princess Louise.

**MR. WARD.**
Ipswich Gem.
John Hopper.
Mrs. Berners.
Mrs. Ward.

**MR. DICKSON.**
Alexander Dickson.

**MR. TURNER.**
Floreat Etona.
Lord Napier.
Miss Poole.
Miss Ingram.

**MR. KNIGHT.**
Princess Louise Victoria.

**MESSRS. BELL & SONS.**
General von Moltke.

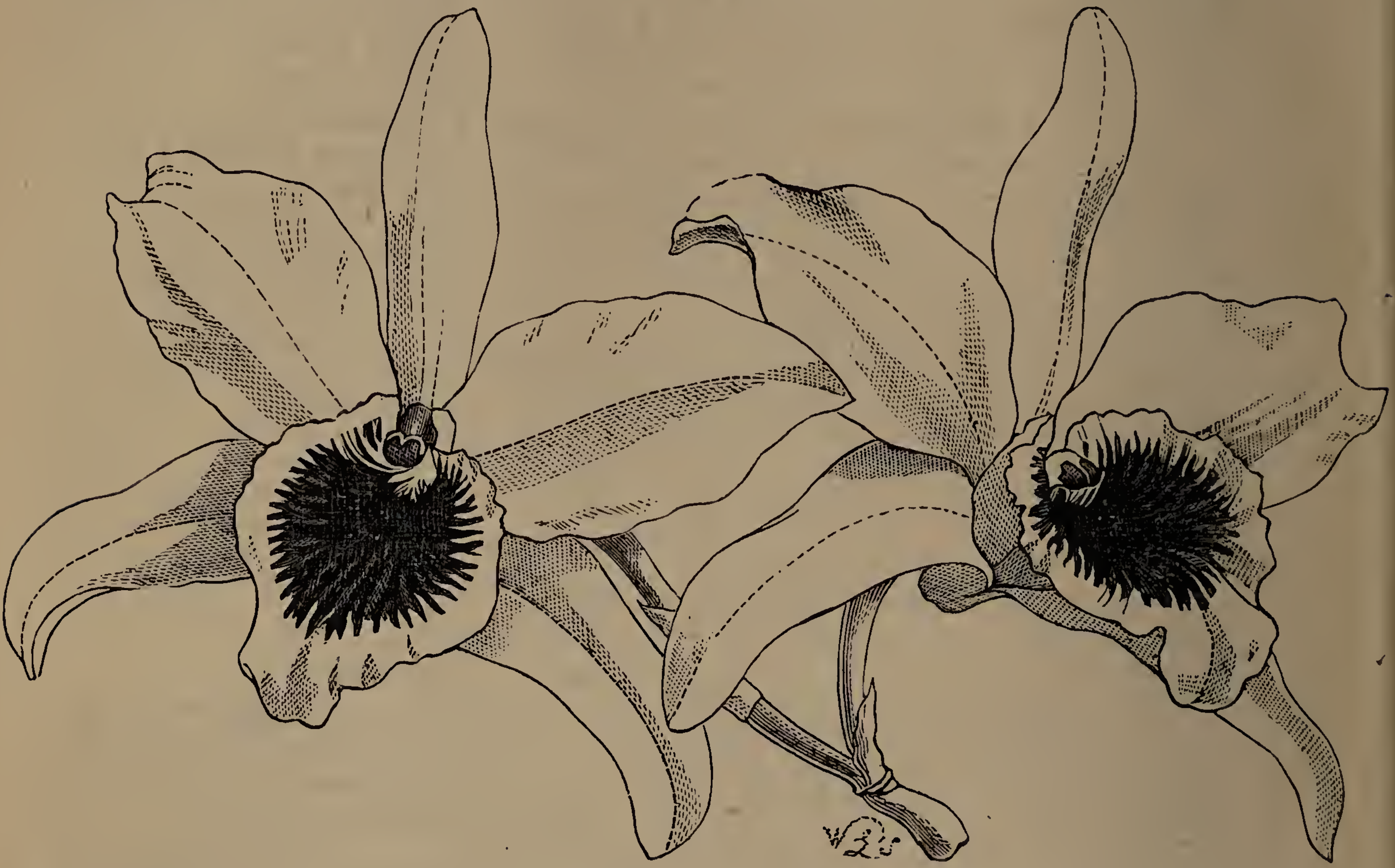
**MR. BENNETT.**
Duchess of Edinburgh (H.P.).

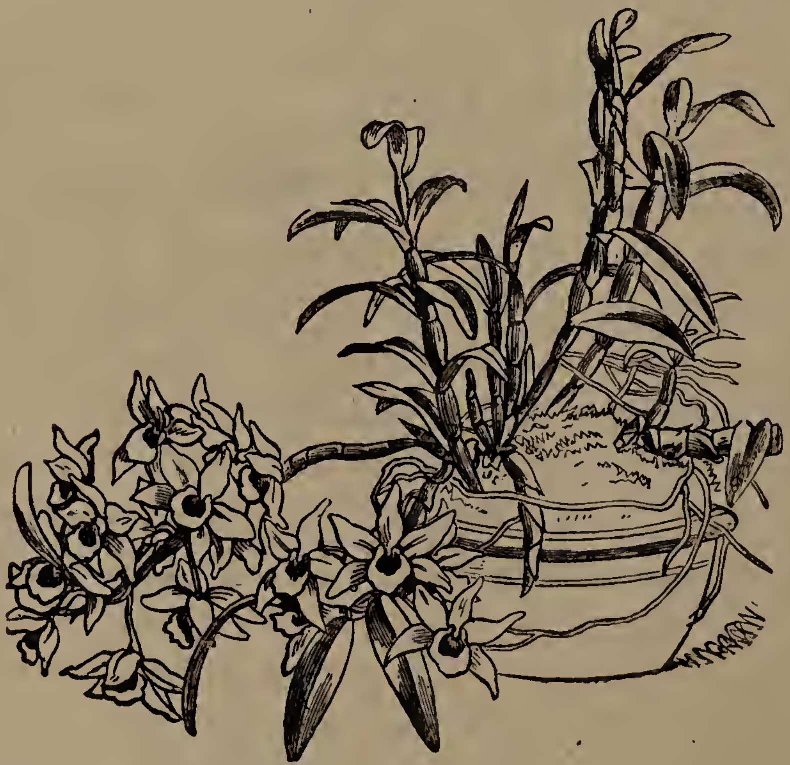
**MESSRS. VEITCH & SONS.**
Duchess of Edinburgh (H.T.).

## DENDROBIUM AINSWORTHII.

HYBRID Orchids are coming thickly upon us. It is well known that numerous beautiful subjects have been raised in Messrs. Veitch's establishments, a very marked degree of success having attended their efforts in hybridising Cattleyas, Lælias, and Cypripediums. In the plant here figured, for the woodcut of which we are indebted to the *Gardeners' Chronicle*, we have another first-class novelty from another source—the collection of Dr. Ainsworth, of Broughton, Manchester. It is a very distinct and attractive plant, well worthy to bear the name of one of the liberal patrons of the Orchid family who have made Manchester famous as a centre of Orchid-culture.

Mr. Mitchell, Dr. Ainsworth's very successful gardener, informs us that *Dendrobium Ainsworthii* is a hybrid between D. heterocarpum and D. nobile. The seed was sown in March, 1867, on a block of wood, and on February 1, 1874, the plant opened its first flowers. During its earlier stages the plant grew very slowly, but last year its progress was more rapid, its pseudobulbs increasing from 4 in. to 1 ft. in length. From this fact Mr. Mitchell draws the inference that it will prove to be a plant of free growth, as it already proves to be one of free-flowering habit. The illustration of the plant is from a photograph, while the detached flowers are of the natural size, as shown at South Kensington on February 18, when it received the award of a First-class Certificate. The colouring of the flower is very pleasing, the ground-colour being white, with a large blotch of rich amaranth, feathered at the edge, occupying a conspicuous position on the lip. When it becomes well established, *Dendrobium Ainsworthii* will be a decorative Orchid of the first rank.—T. Moore.





Dendrobium Ainsworthii, the Seedling Plant, from a Photograph.

# NOTABLE NEW PLANTS AND FLOWERS.

[F.C.C. = First-class Certificate; B.C. = Botanical Certificate; F.C. = Floricultural Certificate.]

AGAVE TAYLORI [B.C.].—A hybrid between *A. geminiflora* and *A. densiflora*, with dark green leaves, a foot in length, bordered with white, and having long white filaments.—*Mr. B. S. Williams: R.B.S., March* 25.

ANTHURIUM HYBRIDUM [B.C.].—A stove perennial of distinct character, with broad, bluntly-hastate green leaves, on brown terete stalks.—*Mr. B. S. Williams: R.B.S., March* 25.

BORONIA MEGASTIGMA [F.C.C.].—A slender-growing species, bearing numerous small flowers, pendent, bell-shaped, and of a dark maroon-colour, yellow in the interior, and very fragrant.—*Messrs. Veitch & Sons: R.B.S., April* 25; *R.H.S., April* 1.

CATTLEYA GIGAS [F.C.C.].—An extremely fine imported form of the *labiata* type, the flowers having a very large broad fringed lip of a rich violet-crimson hue, with two yellow spots.—*Messrs. Veitch & Sons: R.H.S., April* 15.

CATTLEYA VEITCHIANA [B.C.].—A fine hybrid raised between *C. labiata* and *crispa*. It is remarkable for its solitary dark-stained leaf, and its large rosy flowers, the lip richly tipped with purple and yellow in the centre.—*Messrs. Veitch & Sons: R.B.S., March* 25.

CETERACH AUREUM [F.C.C.].—A grand evergreen greenhouse fern, from Teneriffe, resembling a giant form of our common Scaly Spleenwort, the fronds being a foot long and three or four inches broad.—*Mr. B. S. Williams: R.H.S., April* 15.

CHYSIS CHELSONI [B.C.].—A fine hybrid form, with terete pseudobulbs, and yellow flowers, the upper half red-brown, the lip spotted with crimson.—*Messrs. Veitch & Sons: R.B.S., March* 25.

CINERARIA COUNTESS OF DERBY [F.C.].—Broadly margined with deep violet-blue on a white ground, grey disc, fine form.—*Mr. J. James: R.B.S., March* 25.

CINERARIA LORD DERBY [F.C.C.].—Pale disc, white ground, and broad margin of deep rose; fine form.—*Mr. J. James: R.B.S., March* 25.

CINERARIA RIGHT HON. B. DISRAELI [F.C.].—Broad margin of purple-crimson; grey disc, white ground; very fine form.—*Mr. J. James: R.B.S., March* 25.

CLEMATIS COUNTESS OF LOVELACE [F.C.C.].—A charming double-flowered variety in the way of *John Gould Veitch*, but larger and deeper in colour, which is of a pleasing soft blue-mauve. It differs in having large guard sepals, and in being coloured to the centre.—*Messrs. Jackman & Son: R.B.S., March* 25; *R.H.S., April* 15.

CLEMATIS LORD GIFFORD [F.C.C.].—A spring-flowering variety, with eight-sepaled medium-sized flowers of a rosy-lilac hue; novel and pleasing, the sepals oblong-acuminate in outline.—*Mr. C. Noble: R.H.S., April* 15.

CLEMATIS MARQUIS OF SALISBURY [F.C.C.].—A very fine addition to the spring-flowering section, having rich bright maroon-purple six-sepaled flowers, with a flame of claret-red along each segment.—*Messrs. Jackman & Son: R.H.S., April* 15.

CLEMATIS VESTA [F.C.].—A large pure satin-white variety of the spring-flowering type, the flowers eight-sepaled, and massive, with dark anthers.—*Messrs. Jackman & Son: R.B.S., March* 25.

Curmeria picturata [b.c.].—A Maranta-like plant, with ovate-cordate leaves, along the centre of which is a broad band of silver-grey.—*Messrs. Veitch & Sons: R.B.S., March* 25.

Cyclamen Meteor [f.c.].—Blood-crimson, very bright and striking.—*Mr. H. Little: R.B.S., March* 25.

Cyclamen Prince of Purples [f.c.].—Crimson, dashed with a fine hue of purple; fine and distinct.—*Mr. H. Little: R.B.S., March* 25.

Cyclamen Rose Queen [f.c.c.].—Bright crimson-rose, a charming and distinct hue of colour.—*Mr. H. Little: R.B.S., March*, 25; *R.H.S., April* 1.

Cyclamen Royal Purple [f.c.c.].—Rich glowing purple; large and very fine. —*Mr. H. Little: R.H.S., April* 1.

Cypripedium Argus [b.c.].—A Philippine-Islands species of the *barbatum* type, with leaves handsomely tesselated with grey, and dark purple-spotted petals.—*Messrs. Veitch & Sons: R.B.S., March* 25.

Cypripedium Roezlii [b.c.].—A vigorous-habited New-Granada stove epiphyte, with long ligulate acute leaves, and narrow-petaled flowers, purple at the tip; the lip yellow.—*Messrs. Veitch & Sons: R.B.S., March* 25; also *Mr. B. S. Williams.*

Dracæna Baptistei [b.c.].—A distinct and striking form, having the leaves of a purplish-bronze colour, with a rosy edge, and marked with rosy stripes. —*Messrs. Veitch & Sons: R.B.S., March* 25.

Eranthemum reticulatum aureum [b.c.].—A sub-shrubby stove plant, the oblong lanceolate leaves of which are closely belted with yellow veins, which pass to crimson as they become older.—*Messrs. Veitch & Sons: R.B.S., March* 25.

Ficus Parcelii [f.c.c.].—An extremely handsome variegated shrubby plant, the large bold herbaceous leaves being finely blotched with cream on a dark green ground; a great acquisition.—*Messrs. Veitch & Sons: R.H.S., April* 15.

Gymnogramma decomposita [b.c.].—A fine stove golden fern, remarkable for its finely-cut decompound fronds, resembling pulchella.—*Mr. B. S. Williams: R.B.S., March* 25.

Hippeastrum Oriflamme [f.c.c.].—A fine Amaryllis, very bright scarlet, an intense and very telling hue of colour.—*Mr. B. S. Williams: R.H.S., April* 1.

Hyacinth (s. w.) Anna and (s. b.) Sir Garnet Wolseley [f.c.].—Fine novelties, described at p. 82.—*Messrs. Veitch & Sons: R.B.S., March* 25.

Hyacinth (s. w.) Minister Thorbeck [f.c.].—Grey, dashed with pale mauve on the reverse of the petals; very fine bells and spike.—*Messrs. Veitch & Son: R.B.S., March* 25.

Hyacinth (s. mauve) Von Schiller [f.c.].—Mauve-claret, with dark stripes; good bell and close spike; in the way of *Haydn*, but said to be darker. —*Messrs. Veitch & Sons: R.B.S., March* 25.

Lælia flammea [b.c.].—A hybrid raised between *L. Pilcheri* and *L. cinnabarina,* shown provisionally as *L. Veitchii;* the flowers large, and of a distinct orange-colour; the lower part of the lip deep crimson, and handsomely fringed. —*Messrs. Veitch & Sons: R.B.S., March* 25.

Passiflora quadrangularis variegata [b.c.].—A variety of the square-stemmed Passion-flower, in which the leaves are freely blotched like the Aucuba. —*Messrs. Veitch & Sons: R.B.S., March* 25.

Rose (h.p.) Duchess of Edinburgh [f.c.c.].—A charming Rose, of a clear soft pink hue, of full substance, and with a reflexed character like *La France.—Mr. H. Bennett: R.H.S., April* 1.

SAXO-FRIDERICIA SUBCORDATA [B.C.].—The correct name of the plant noted as *Rapatea pandanoides*, at p. 61. It is a very singular plant, of the Xyridaceous order, and closely related to the rushes.—*Messrs. Veitch & Sons: R.B.S., March* 25.

VANDA CŒRULESCENS [B.C.].—An Indian species, of small stature, with large blue flowers, having the anterior part of the lip very dark blue.—*Messrs. Veitch & Sons: R.B.S., March* 25.

## GARDEN GOSSIP.

WE have previously, in these pages, directed attention to M. Alphand's splendid work on the Parks and Gardens of Paris, entitled *Les Promenades de Paris* (published by Rothschild, 13 Rue des Saints Pères, Paris; Barthes and Lowell, Great Marlborough Street, London), and we have now the satisfaction to announce that the work has been completed. It is so full of information, so abounding in plans, in sketches of scenery, in figures showing the habit and character of all kinds of decorative plants, that it ought to be in all public libraries and in all garden libraries. It is produced with so much artistic taste and merit, that it ought on that ground to find a place in the library of every country mansion. We shall endeavour next month to give an analysis of its contents.

—— A WRITER in *Notes and Queries* states that the origin of the name *Green Gage* is simply that the Plum was brought into England, about the middle of the last century, by the Rev. John Gage, Roman Catholic priest, in some way connected with a monastery or conventual establishment in France. The laws of that time against Roman Catholic priests were so severe that Mr. Gage lived abroad, but frequently visited his brother, Sir Thomas Gage, of Hengrave Hall, near Coldham, in the county of Suffolk, fifth baronet. In one of these visits he brought over, from the garden of the monastery, grafts of this excellent fruit-tree, which were cultivated in the garden at Hengrave Hall, and soon were spread throughout England.

—— A NEW tuberous-rooted Begonia called *Begonia octopetala*, has lately been introduced by Messrs. Froebel, of Zurich. It has large rounded leaves, and very large 8-petaled flowers, white on the inner surface, rose-pink beneath, almost as in Anemone japonica alba. The plant is a native of the highlands of Peru, and may be considered as hardy as B. boliviensis. Amongst the hybrids of this latter some double-flowered forms have appeared, both in the establishment of Messrs. E. G. Henderson and Son and in that of M. Lemoine. It is the male flowers only which are double, and they are doubled by the substitution of petals for stamens.

## GARDEN WORK FOR MAY.

### FLOWERS.

SPRING-FLOWERING plants must soon give place to the summer occupants of the flower-garden, and a stock for another year must be provided for by dividing and replanting a sufficiency in the reserve ground. Having, therefore, devised and sketched out the arrangements for summer planting, proceed with the renovation of the soil, the exigencies of cultivation as to manuring being ruled by the crop the beds are to carry. Such plants as are prized for the magnitude of their foliage must have an abundance of rotten manure, and the soil deeply worked up; in fact deep cultivation is most desirable with all plants. *Calceolarias, Variegated Pelargoniums, Lobelias, Violas,* &c., luxuriate in a fresh, turfy soil, well enriched; while flowering *Pelargoniums, Tropæolums,* &c., bloom most satisfactorily in a poor soil. *Coleus, Alternanthera,* and the majority of plants used for carpet-bedding delight in a light, rich soil, and stiff and formal as this style is, it is highly fashionable. Simplicity of arrangement is the most effective, while intricacy of design often results in a muddle. Edgings of *Echeverias* and other hardy subjects may be planted at once, and towards the middle of the month, *Calceolarias*, *Verbenas*, and others of the hardier plants, the state of the weather being the best index by which to rule these operations. Defer the planting-out of tender plants until June. *Roses* must have attention, so as to keep down the insects. Clip Box edgings. Plant out spring-struck *Phloxes* and other hardy perennials, and propagate for stock.

In the Conservatory it will be desirable to prolong as much as possible the flowering period of such plants as are in bloom; therefore a slight shading will be necessary during the heat of the day, securing meanwhile a healthy circulation of air, as the blossoms quickly fade in a close, humid atmosphere. *Camellias* and other plants, which are moisture-loving plants during their season of growth, are not unfrequently planted out in such structures. It will be necessary to syringe these freely early in the afternoon, so that the atmosphere may become somewhat dry before night, leaving on a chink of air at the highest point to prevent excess of condensation. Pillar and roof-climbers will require regular attention.

In the Stove constant attention must be directed to the repotting of plants before they become pot-bound, and the potting-on of all cuttings that are rooted. *Poinsettias* should be propagated and kept growing in a brisk temperature, keeping such as are cut hard back for potting on, near to the glass. *Achimenes*, *Gloxinias*, &c., do best with an abundance of light, and should be kept near to the glass; whilst under-growth plants, especially such as delight in shade, must be screened from the sun. Staking, training, and stopping back quick-growing subjects must have prompt attention.

*Orchids* should now be encouraged to make a vigorous growth, watering them freely and maintaining a humid, moist atmosphere; shade from direct sun, and ventilate freely. *Ferns* must also have an abundance of water at the root, with a moist atmosphere. Shift on seedlings and such as are pot-bound.

Greenhouse plants, such as *Epacrises*, *Heaths*, &c., which are now in an active state, will require a liberal supply of water, with abundance of air, and must be guarded against overcrowding. Plants of *Cytisus*, which have done flowering, should be cut back. Regulate the growth of *Acacias*, by cutting back straggling shoots; syringe freely, and encourage in a genial temperature. *Azaleas* that are starting into growth delight in a brisk, growing temperature. *Lantanas*, *Bouvardias*, *Salvia splendens*, and all soft-wooded plants will require frequent shifts, pinching back the shoots to promote well-furnished specimens. *Calceolarias*, *Cinerarias*, and *Pelargoniums* that are coming into flower should be encouraged with weak manure-water, shading in the day during bright weather. The finest sorts of *Cinerarias*, when they have done blooming, should be fumigated, and planted out in light soil under a north wall to produce suckers. *Fuchsias* should be shifted, pinching back side-shoots upon young plants, and such as are required for late flowering. *Chrysanthemums* should be potted on, using turfy loam, with one-third rotten manure and sand, pinching back the shoots. *Cinerarias*, *Cockscombs*, *Balsams*, and *Primulas* should be potted on, pricking off the small plants in pans. A good batch of *Scarlet Pelargoniums* should be potted on, and placed out-of-doors for autumn blooming. Tender bedding-out plants, such as the *Coleus*, may still be propagated; and freely expose such as are established, preparatory to planting out.—George Westland, *Witley Court.*

## FRUITS.

*Pines:* Give plenty of air on warm, quiet days, but do not create a draught by giving front and back air at the same time; this is the principal cause of the plants at times assuming a brown and unhealthy appearance. Shift the succession plants as they may require it, and keep up a moist growing heat, ranging about 70° at night, and from that to 90° during sunshine. By all means avoid a burning bottom-heat; keep up a moist heat in the fruiting pit; syringe and close *early* in the afternoon. The night temperature should range from 75° to 80°, and that in the day-time from 80° to 90°. Give those plants that are intended for winter fruiting their final shift.

*Vines:* Clear out all plants, such as Strawberries, French Beans, &c., from the vineries, otherwise red-spider may be troublesome on the Vines. Artificial heat should be still applied to all, except the *late* houses, so that the temperature does not fall below that previously maintained. When the fruit is perfectly ripe, the house should be kept cool, to prevent the fruit shrivelling. Keep the latest Vines retarded as much as possible (with the exception of Muscats) until they are showing their fruit, when the usual treatment must be given. Water inside borders copiously, and occasionally with liquid manure. Pot-Vines should have every assistance, by giving frequent waterings with manure-water, and mulching the surface of the pots with strong manure. Cut away all useless growth, and reduce the crop to reasonable limits.

*Peaches and Nectarines:* Tie in the shoots, and expose the fruit in the early house as much as possible by cutting away all useless growth. Still continue to syringe the trees, watering at the root till the fruit is ripening, and giving air at all times. At this stage the temperature may be raised with safety. Attend to previous directions for later houses; use the syringe freely, keep down insects, and do not neglect watering the borders.

*Cherries:* Reduce the moisture when the fruit begins to colour, at the same time the temperature may be increased, to hasten maturity. If growing in pots, the supply of water at the root must be continued when the crop is gathered; the trees should then be removed to a shady situation, and well syringed.

*Strawberries:* Introduce the last lot of plants under glass at the beginning of the month; these will keep up a supply of forced fruit till the middle of June, when in all probability the early kinds outside will be ripe. Towards the end of the month it will be as well to remove the pots to cooler quarters, such as a cold frame or under a canvas screen.

*Melons:* Stop the shoots at every joint where there is a show for fruit, and cut away all useless growth. Give plenty of air while the fruit is setting, and a good soaking of water after it has set.

*Figs:* Withhold liquid manure from any trees that are growing too rankly. Syringe frequently, except where the fruit is ripening, and do not allow any of the plants in pots to suffer at any time for want of water at the roots.

*Hardy Fruit:* Up to the time we write the weather has been most favourable, and at present the prospect of a plentiful crop of hardy fruit is most cheering. *Apricots* alone seem to have suffered from the effect of frost, and that only in some localities. The disbudding of *Peaches* and *Nectarines* may now be commenced; remove at first a few of the strongest shoots from the vigorous branches, but all the foliage on the weaker members should be encouraged for the present, and at all times retain sufficient foliage to shade the main branches from the scorching sun. Green-fly will now perhaps be troublesome; use a wash of tobacco, soft-soap, and sulphur; 2 lbs. of each will make 25 gallons, which should be used with a syringe in the evening. Go over *Apricot* trees, and remove all strong shoots that are not required to fill space. Keep a sharp watch for caterpillars—the curling of the leaf will indicate where they are; go on thinning the fruit, but not too severely at present, leaving the final thinning to a later period. Give the *Strawberry*-beds a good hoeing; then mulch with litter or short grass.

*Orchard-houses* will require plenty of air, and syringing every day. Keep the fruit well thinned, and let there be no stint of water at the roots.—J. POWELL, *Frogmore*.

## VEGETABLES.

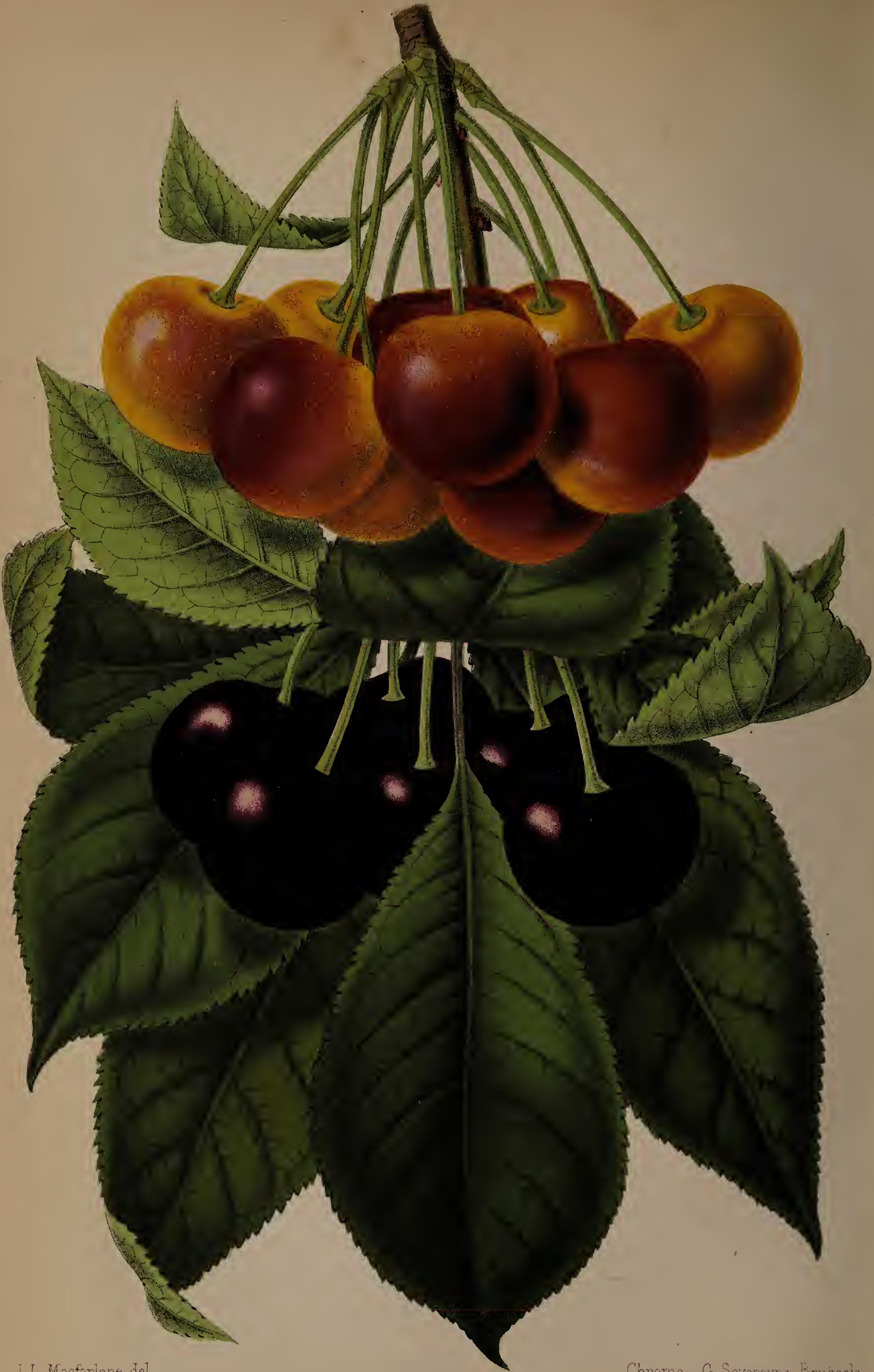
Make successional sowings about the third week in the month of all the more free-growing subjects of the *Borecole*, *Broccoli*, and *Summer-Cabbage* types, and continue to transplant into nursery beds all young seedling plants of such as are large enough to undergo that process. Successional sowings must also be made of *Beans* (Broad), *Peas*, and *Spinach*, as soon as the last-sown seeds show well through the ground; that is, where a constant successional supply is in demand. Where this is not desired or intended, of course, late successional sowings may be made, allowing a period, devoid of pickings, between. *Asparagus* plantations must be kept free from weeds; it is better to cut all the growth freely away at the ground-line than to cut the finest alone, leaving the weaker stems to grow. A slight dressing with salt in some form or other will prove beneficial about this time. Tie up early *Lettuces* and *Endive* freely, make other successional sowings of the Brighton or Paris Cos and Cabbage kinds, and thin all out, hoeing freely amongst all young plantations. A permanent or full crop of *Kidney Beans* may now be sown. Pot off *Capsicums*, *Tomatos*, &c., and keep them in a comparatively cool temperature. Sow *Ridge Marrows*, *Gherkins*, &c., about the second or third day, and as they germinate and grow freely, pot them off as soon as they show the second rough leaf, and before they receive a check in the seed-pot, which they very quickly do.

Towards the end of the month thin out young crops of *Onions*, *Carrots*, *Parsnips*, *Turnips*, &c., and ply the hoe freely amongst them. Do not hesitate to thin them freely, for many vegetables are irretrievably spoilt through over-thick cropping. *Cauliflowers* should be freely hoed, and watered with moderately strong manure-water. The hand-lights and other kind of protection should be moved away from them, that the air may gain free ingress between and around them. *Cauliflower*-seeds should also now be sown for the Christmas crop; Veitch's Autumn Giant is the best variety for this purpose. *Broad Beans*, immediately they have done blooming, should have their shoots pinched back at the points, which will throw more strength into the plants.

Sow *Herbs* generally, such, for instance, as *Parsley, Coriander, Thyme*, *Savory*, *Hyssop*, *Marjoram*, *Fennel, Burnet*, *Purslane, Basil*, &c., upon a warm, sunny border, and transplant them as soon as they become large enough. Prick out *Celery* on to a previously-prepared hot-bed of moderate depth only. Thin out *Cardoons.*

When means exist, plant out *Cucumbers* into another or successional frame. Less bottom-heat will suffice now, consequently less materials will be required in making up the bed. Give also more natural warmth, by damping the frame down, and shutting it up close about 3 p.m. daily; subsequently, should the night prove moderately warm, give a small amount of fresh air at the back, by slightly tilting a light, taking care, however, not to allow the temperature to fall below a minimum of 58° or 60°.

Particularly attend to the root-watering of all freshly planted plants, of whatever kind, should the weather prove at all dry, which it sometimes does even during this month. In regard to ordinary routine, the hoe should be kept constantly in use during all fine, dry weather.—WILLIAM EARLEY, *Valentines*.



J. L. Macfarlane, del.

Chromo. G. Severeyns Brussels.

Cherries.

1. Frogmore Early Bigarreau. 2. Noir de Schmidt.

# BIGARREAU CHERRIES.

WITH AN ILLUSTRATION.

OUR readers will, we think, agree with us that the Cherries represented in the accompanying plate are really handsome fruit. For the opportunity of figuring the Frogmore Early Bigarreau, a variety which will be found well deserving of cultivation wherever Cherries are cared for, we are indebted to Mr. Jones, gardener to Her Majesty at Frogmore, who was good enough to forward to us the specimens which Mr. Macfarlane has very cleverly depicted in the accompanying plate. It is really a tempting-looking fruit, the sample represented being, in fact, rather below the actual size, in consequence of the tree having been recently root-pruned. It has also the merit of high quality, being a delicious fruit, and it is both early and an abundant bearer.

We add Dr. Hogg's description :—Fruit large obtuse heart-shaped, compressed on the side, and with a faint suture. Skin pale waxen-yellow in the shade, suffused with deep red next the sun. Stalk two inches long, with a very small receptacle. Flesh remarkably tender and melting, as much so as in a Gean ; very juicy, and with an excellent flavour.

The Bigarreau Noir de Schmidt was obligingly sent to us by Mr. Rivers, of Sawbridgeworth, being one of the kinds which were so finely cultivated by him last year. It, too, is a very handsome Cherry of the very highest quality. Our note of the sample from which the drawing was made runs thus :—Fruit large, bluntly heart-shaped, the stalk set in a moderate cavity. Skin dark shining blood-red. Flesh red, tender, juicy, and of excellent flavour.

No one who cares for first-class Cherries could do wrong to add these varieties to his collection.—T. Moore.

# FORCING CHERRIES IN POTS.

ALTHOUGH the forcing of Cherries in pots is old in practice, there are but few places in England where it is carried out to any extent. This is the more surprising, when we consider the increase of glass accommodation everywhere, and the ease with which they can be managed, by shifting them, as they progress through the different stages, to a proper temperature. It is not in every place that the gardener can afford to give up a whole house to permanent trees ; and although we can accommodate a pot cherry by shifting it about, it is not so easy to find other suitable plants for the cherry-house, without bringing in troublesome insects, &c.

There is also this advantage attendant upon potted Cherry-trees, that when in bloom there are few plants more sweet and effective. A dozen half-standard Cherries in full bloom make as good a display as a dozen white Azaleas, and stand equally as long in bloom. Then, again, a conservatory or greenhouse, where plenty of air can be given, is the very best place for them while setting their fruit—by far the most difficult process. There must be bad management indeed, if they do not stone and thin themselves. When set they can be moved to a higher temperature, under Peach-trees, or to a Vinery just started. By the end of April they will come on in any house, and the last batch may be set out of doors. Although some persons would be inclined to count as ridiculous the idea of putting plants in the centre of a dining-table, they might perhaps change their minds if they saw the effect of a neat-headed Cherry-tree, covered with its pure white blossom, or with from ten to twelve dozen of fine ripe fruit hanging down to meet the eye.

Some people say, "Oh! they are a great deal of trouble, requiring to be shifted about backwards and forwards." This may be so, but my experience is that there is nothing got without trouble, and if we compare the labour attending the culture of any ordinary greenhouse plant with that of such as these, there is only this difference, that here we get a second return for our trouble; for instead of simply obtaining the flowers, there is the fruit to follow; and then the only attention necessary until the next season is to look to the watering of the roots. The trees are not much troubled with insects, the caterpillars and black-fly being their chief enemies, and both these are easily stopped either by smoking or picking.

They force these trees very successfully in Germany, and mostly in low pits, often getting a nice lot of fruit in January. At the Royal Garden at Potsdam whole ranges are set aside for them. I do not remember having seen any in France. With gentle forcing the trees last for a good many years; and when planted closely in the form of hedges they can easily be protected by a covering of nets in the summer and autumn. Where birds are as plentiful as they are here, no sort of fruit can be got without protection is afforded both to buds and fruit. The *May Duke* is the only sort fit for pots, and of this the fruit with good feeding get to be very fine. We generally arrange for the second lot of one year to come first the next.—J. F., *Cliveden.*

## THE ROYAL HORTICULTURAL SOCIETY.

THE first phase of the recent movement in the Royal Horticultural Society may be said to be fairly passed; the newly elected Council is in undisputed possession of power, and it is only just to say that they are applying themselves to their work with an assiduity and earnestness that should commend their efforts to all who wish well to Horticulture.

On looking back, one cannot help wishing that the personalities and acrimony which here and there cropped up during the discussion could be obliterated and forgotten. No doubt, words were uttered in the heat of conflict which the judgment on calm reflection would hardly approve; and if this view could be taken—and I think it may justly be taken—the bitter feeling which they have left behind might be moderated or assuaged. Present at all or nearly all the meetings, it struck me throughout that due allowance was not made for the position of things when the late Council accepted office. They were—as the new

Council will assuredly find themselves—so much in the hands of Her Majesty's Commissioners, that they were hardly free agents. Now, if you bring forward a man with his hands tied and tell him to fight, or hold your hand before his mouth and tell him to talk, if he be a wise man, he will use his hands and his tongue only so far as he sees the cause he has at heart will benefit by their use.

The attacks on the late Secretary were, in my judgment, in bad taste, and much to be lamented on higher grounds; they were not only personal, but unmerited and unjust. I do not hesitate to express the opinion that no living man has done so much as General Scott to obtain the higher and wider recognition of Horticulture which it deserves. If it should be said that the rising importance of Horticulture offered him the opportunity which did not exist before, and that even more might have been done in this direction, I readily grant both propositions. But to do the right thing at the right time, is surely the highest evidence of administrative wisdom, and if "more might have been done," I would ask who else has done so much? While free to admit that, considering the position in which the Council of the Royal Horticultural Society stand to Her Majesty's Commissioners, it would have been better that both secretaryships should not have been in the hands of one and the same individual, yet I maintain that the Royal Horticultural Society benefited largely by the Secretary's administration. Gratitude is not looked for as a reward for public services, but justice should be done, irrespective of private or party views, and honour should be given where honour is due.

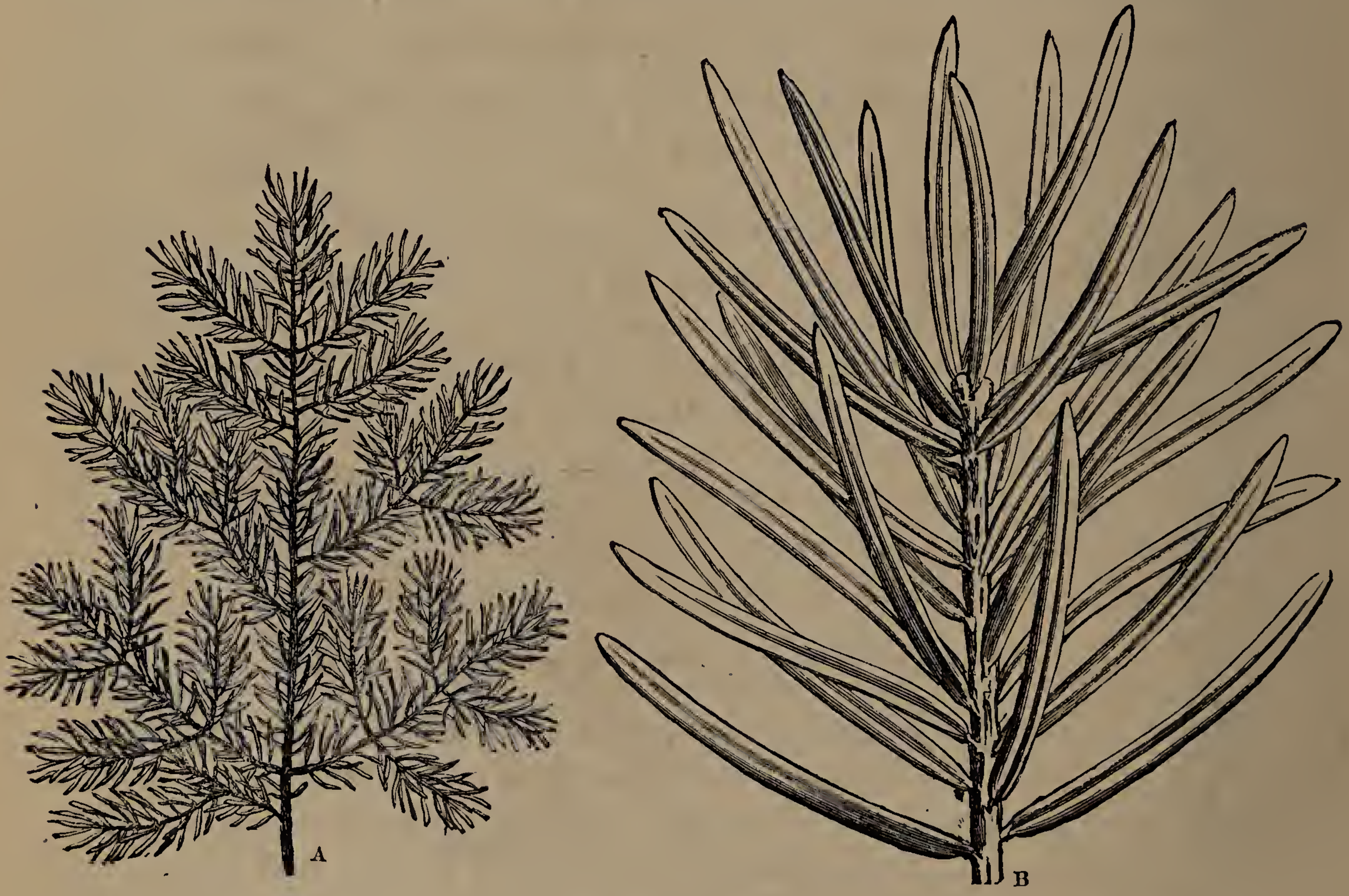
Believing, as I do, that Horticulture is now fairly entitled to take a higher position than it actually takes among the arts and sciences, I deplore the fact that our Horticulturists do not show more public spirit with a view to this end. Every well-wisher of the Royal Horticultural Society should endeavour to promote a good understanding between the Council and Her Majesty's Commissioners. The Royal Horticultural Society *may be useful* as a *local* institution, and to this I fear things are tending; but let us remember *it has been national in the past*, and to denationalize it now, though it might serve the interests of a few, would certainly prove a loss to the community at large.—W. P.

## THE CRACKING OF FRUITS.

NO one values more than I do the results of the unwearying researches made by physiologists, whether in regard to objects connected with my own immediate pursuits, or in fields of less importance to the gardener. I cannot, however, help thinking that their decisions are occasionally arrived at or based upon data which are erroneous, or to say the least, fallacious and misleading. For instance, M. Boussingault attributes the cracking of fruits to an accumulation of water in the tissues, the increased volume resulting from the introduction of water through the skins during rainy periods, by means of endosmose. With us here in England, the cracking of fruits is too general to admit of this explanation alone, as, for example, in the case of Josling's St. Alban's Grape, or that of certain other kinds of fruit on certain trees, which persist in cracking annually. I have one Pear-tree here, which bears two kinds of fruit; one, the Beurré Diel, is always of remarkably fine quality and development; the other is so small, so inferior, and so much cracked, that I have been unable hitherto to determine what it is. If, then, some kinds of fruit crack annually, on certain trees, whilst other kinds, *on the same trees*, enlarge and ripen off of superior quality, I fail to see the applicability of M. Boussingault's conclusions. The variety above referred to, which always cracks, must have either a constitutional weakness, or, as may be inferred by reference to its pigmy size, is totally denied the necessary aids to the attainment of perfection.—William Earley, *Valentines.*

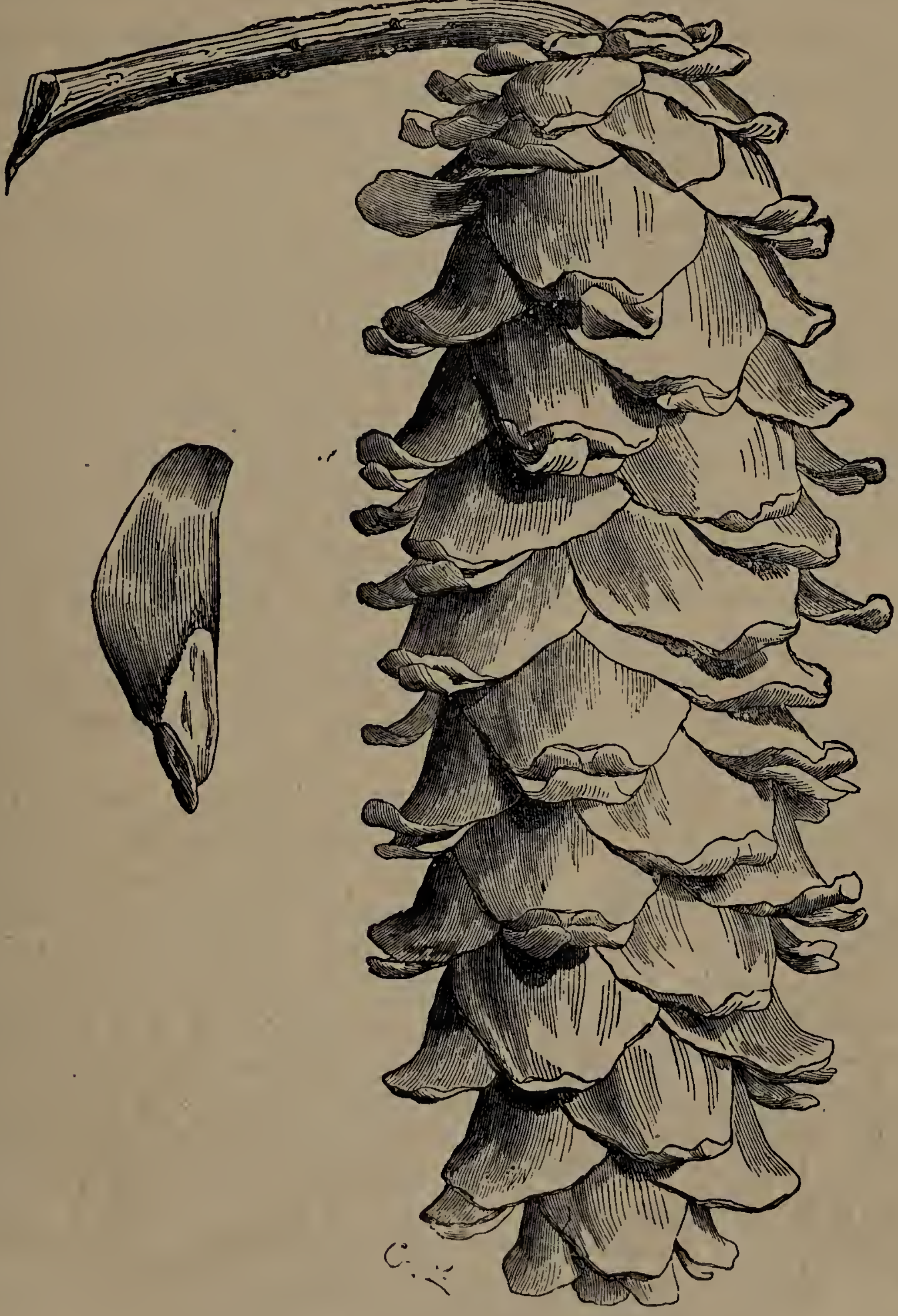
## PSEUDOTSUGA DAVIDIANA.

We have here what appears to be a novelty amongst Conifers. It has been introduced to the French Gardens from China, and has engaged the attention of M. Carrière, a gentleman who has made this class of plants his special study, and from his account of it in the *Revue Horticole* (1873, 37), we extract the following particulars, along with the accompanying illustrations. If, writes M. Carrière, through insufficiency of materials we cannot absolutely say what position this plant ought to occupy, we can at least affirm that it is new, and that till now we had no knowledge that any similar kind existed in Europe. It is so rare in China, whence it comes, that only one individual of it has been found. The discoverer is the Abbé David. This species is



Pseudotsuga Davidiana: a, branch, one-tenth nat. size; b, portion of branch, nat. size.

so different from all we know, that, not being able to place it in any established genus, we had created that of *Pseudo-Abies* for it, because of the similarity of several of its characters with those of *Abies*, from which, however, it is clearly separated by certain others. We had arrived at this conclusion, when we found that M. Bertrand, a learned young botanist, had made a particular study of this plant, which showed him that it belonged to the genus *Pseudotsuga*, and proved a new species, to which he proposed to give the name of *Davidiana*:—



PSEUDOTSUGA DAVIDIANA, cone : nat. size.

*P. Davidiana*, *C.E.B.*, in *Herb. Mus. Paris* (*sine descriptione*).—A large tree, whose figure, says the Abbé David, resembles that of an Araucaria when seen from afar; the branches spread horizontally, and ramify laterally like those of *Abies*. The leaves are subdistichous by reversement, 1⅕-2 in. long, and about ⅙in. broad, thick, coriaceous, strongly keeled below, broadly canaliculate above, with edges folded, and constituting to the lower part, on each side of the keel, a broad rut. The cones have a rather long peduncle and are pendent, 5-6 in. long, and about 2½ in. in diameter when open; its scales persistent, not gibbous, wanting the apohpysis, slightly recurved at the tip; the seeds remain in the cone even after the opening of the scales. The scales are of a fawn-red, exactly recalling those of *Pinus Strobus* in their aspect as to form, nature, and dimensions. The bracts are laciniately divided, attaining about half the length of the scale, with a longer acuminate mucronate central division. Seeds irregularly triangular, cuneiform, with a persistent yellowish-white, shiny, rather consistent wing, $\frac{4}{5}$ in. long, $\frac{3}{5}$ in. broad in its greatest diameter.

*P. Davidiana* is one of the most curious of known species ; it came originally from China, where it seems to be rare, since the Abbé David, who has travelled much in divers parts of the empire, has met with only a single individual in the environs of Pekin. He describes the tree as presenting from a distance a very pretty aspect, like that of an Araucaria. In so vast a country, however, where so many parts have not yet been visited by Europeans, it may be hoped to find some further representatives of the species, and that then seeds may be introduced which will permit of its multiplication in Europe.—M.

## GARDEN LITERATURE.

ONE of the grandest and most elaborate of gardening books which has ever issued from the press is LES PROMENADES DE PARIS,* a publication to which we have previously alluded as the several parts came to hand, and of which we briefly announced the completion at p. 117, when we promised to give an analysis of its contents. The book is of large folio size, admirably printed on paper of the finest quality, and profusely illustrated with coloured plates, steel engravings, and woodcuts. The contents are arranged under three principal divisions, relating to the Bois de Boulogne, Bois des Vincennes, and what are called the *Promenades intérieures* of Paris, these being preceded by an Introduction, and followed by tabular descriptions of the plants employed for the decoration of the city.

The Introduction is a most elaborate and interesting essay on the various styles of gardening, from the earliest historic times down to the present day, including the gardens of Asia, Egypt, Greece, Rome, China, and Japan ; the gardens of the middle ages ; and of the renaissance in Italy and in France ; the *jardins réguliers*, representing the French style ; and the *jardins irréguliers*, representing what is called the English style. This portion is illustrated by 105 woodcuts, showing plans and bird's-eye views illustrative of the several styles. The portion devoted to the Bois de Boulogne comprises ten chapters, devoted in order to (i.-ii.) a general description of the place, and of the earthworks ; (iii.) roads and pathways ; (iv.) general distribution of the water supply, and description of the arrangements for watering ; (v.) lakes, brooks, and cascades ; (vi.) forests, plantations, lawns, and garden works ; (vii.) architectural works ; (viii.) establishments conceded, as the Pré Catalan, Hippodrome, acclimatization gardens, skating-grounds, and ice-houses ; (ix.) Artesian well ; (x.) the gardens of La Müette. These chapters are illustrated by 215 woodcuts, 21 steel engravings, and 22 chromolithographs. The section devoted to the Bois des Vincennes comprises the following five chapters :—(i.) general description ; (ii.) works of embellishment ; (iii.) waterworks ; (iv.) cost of keeping, &c. ; (v.) the various establishments existing, as the Imperial farm, establishments for fish-culture, ice-houses, café restaurants, Hippodromes, and

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* *Les Promenades de Paris: Bois de Boulogne, Bois de Vincennes, Parcs, Squares, Boulevards.* Par A. Alphaud. Paris: J. Rothschild, 13 Rue des Saints Pères. London: Barthes & Lowell, Great Marlborough Street.

Jardin d'Arboriculture, the whole illustrated by 91 woodcuts and nine steel engravings. The Inner Promenades of Paris are dealt with in five chapters, namely:—(i.) The Parks of Monceaux, Buttes-Chaumont, Montsouris, and the Champs Elysées; (ii.) the Squares of the Tour St. Jacques, the Arts-et-Théâtres, the Innocents, the Temple, Montholon, Ste. Clotilde, the Trinité, the Batignolles, Louvois, the Chapelle Expiatoire, Charonne, Laborde, Montrouge, Monge, Vintimille, the Archevêché, the Places Ste. Geneviève à Belleville, Victor, La Chapelle, and the Invalides; (iii.) the Places Malesherbes, de Grenelles, du Roi de Rome; (iv.) the Planted Public ways, as the Avenue de l'Observatoire et Jardin du Luxembourg, Avenue de l'Impératrice, Avenue de l'Empereur, Boulevard Richard Lenoir, &c.; (v.) the Plantations. In this section are given 73 woodcuts, 45 steel engravings, and one chromolithograph. The concluding section, entitled "Arboretum et Fleuriste de la Ville de Paris," contains a descriptive tabular list of the plants employed, under separate heads, as Deciduous and Evergreen trees, Deciduous and Evergreen shrubs, American shrubs, and Herbaceous and Frutescent plants with decorative foliage or flowers. Good indices and tables of contents complete a work which is altogether unrivalled amongst garden publications; one which should be added to every public library, and should find a place in the study of the landscape gardener and the country gentleman.

In Mr. Burbidge's DOMESTIC FLORICULTURE* we have, in a companion-volume to Mr. Thompson's *Handy Book of the Flower Garden,* and Mr. Sutherland's *Hardy Herbaceous and Alpine Plants,* a very complete and exhaustive essay on what may be called indoor or parlour gardening. It is divided into three parts, cultural, ornamental, and descriptive. The text is full of useful hints. Thus the cultural portion abounds in such passages as these:—"One of the most fertile causes of failure results from a bad selection;" "it is always best to commence with young plants, either seedlings or rooted cuttings, as these gradually become inured to the fresh conditions in which they are placed, forming sturdy little specimens, full of vigorous health;" "one of the most common and fatal errors into which the inexperienced fall, is that of making choice of inert and finely-pulverised soil for potting;" "never use cold water." The whole course of instruction is thoroughly practical and to the point, and is clearly and intelligibly written. The second part is devoted to the question of arranging plants and flowers as domestic adornments, including bouquets and dinner-table decorations. The third or descriptive part introduces to us the plants which the author thinks best suited for indoor culture, with such special hints on their treatment as it has been thought would prove useful. This book may be described as a good idea well carried out, and will assuredly commend itself to the amateur class for whose use it is provided.

As a popular, lightly-written, and gossipy account of our native plants, Miss Pratt's FLOWERING-PLANTS OF GREAT BRITAIN† may be recommended to those who do not take up their study from a scientific point of view. The descriptive matter is brief, and seems to be fairly accurate, while the general remarks are copious and interesting. The authoress does not, however, appear to possess the latest information as to the connection between the Barberry and the rust on corn, and argues that the idea of the *Æcidium* of the barberry originating the rust on wheat must be erroneous, since the *Puccinia* of the latter is a totally different plant. It is, however, now found the *Puccinia* does not reproduce itself when sown, but gives rise to the *Æcidium*, and *vice versâ*, so that there is good reason to believe that the connection is a very close one, the *Æcidium* being a mere form of the *Puccinia.* The text is clearly printed in a bold type, but the lettering to the plates would have been better if more legible, the more especially as they are not referred to in the text. The figures, which consist of from four to six allied subjects grouped together on one plate, are unequal in merit, but generally fairly characteristic; there is, moreover, some practical advantage in getting similar species brought together into one view. From the popular side of the question, the book may be commended as a useful one, and the reissue will afford to many a favourable opportunity of acquiring it.

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* *Domestic Floriculture, Window Gardening, and Floral Decorations;* being Practical Directions for the Propagation, Culture, and Arrangement of Plants and Flowers as Domestic Ornaments. By F. W. Burbidge, Author of "Cool Orchids and How to Grow them," &c. With 200 Illustrations on wood. William Blackwood & Sons, Edinburgh and London.

† *Flowering-Plants, Grasses, Sedges, and Ferns of Great Britain.* By Anne Pratt. Reissued in 12 Divisions. Division I., with 28 pages of plates printed in colours, embodying 160 subjects. London: F. Warne & Co.

The cultivation of Orchids, requiring a comparatively low temperature, has become so wide-spread, that Mr. Burbidge's book on COOL ORCHIDS,* as they are called, will no doubt find, as it deserves to find, many readers. After a few introductory pages we have chapters on Purchasing Orchids, Potting and Watering, Resting Orchids, Specific Variation, Orchid-houses, Importing Orchids, Orchids for the Sitting-room, Hybridising Orchids, Propagation of Orchids, Noxious Insects, and finally, a Descriptive List of numerous species and varieties adapted for this mode of cultivation. The general instructions given under the various chapters are full and trustworthy, while in the course of the descriptive list a plentiful sprinkling of special information on nice points of cultivation is interspersed. Altogether it is a very good book on a very popular subject.

## CULTURE OF AZALEA INDICA.—II.

AFTER this early potting (see p. 2) the young plants should be placed in a moderate heat,—say 55° by night, with a rise of 10° or 15° by day. The syringe should be used every afternoon, and the house closed early whilst the sun has yet considerable power; this not only economises fire-heat, but is much more genial to the plants. If the plants have been affected with their usual visitors—thrips—during the season previous, in all probability the eggs deposited in the autumn will now come to life, and the insects will commence their attacks, breeding on the young leaves. When they are found, the plants should be well washed with tobacco-water; this is safer than fumigation, which often injures the young foliage. By the end of May the points of the shoots should be pinched out, to induce them to break. Keep the atmosphere moist, and continue the use of the syringe, which will cause them to push a second growth, and this will result in a considerable gain in size by the end of September, when the plants will most likely set flower, and should then have the atmosphere kept drier, withholding the syringe, and gradually giving more air, to ripen them fully before the advent of short winter days. The temperature should now be reduced, so as to allow them a slight rest, but they should never be allowed to remain where it is lower than 45° in the night, for if such occurs, as already stated, they receive a check that materially interferes with their progress the ensuing year.

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* *Cool Orchids, and How to Grow Them.* With a descriptive list of all the best species in cultivation. By F. W. Burbidge. London: R. Hardwicke.

As soon as the new year comes in, give them, as recommended last season, a little more heat to induce early growth. Again, at the end of February, repot, giving them 3 in. more room, treating as before in respect to heat and moisture. Again stop the points of the shoots, after which treat them in every way as recommended for the preceding summer. In the autumn, when the plants set their buds, and get their growth well matured, it should be determined what they are intended for. If the object is to get up large specimens as quickly as possible, then the preceding year's practice must be repeated. If the plants are required for decoration, which, if all has gone on well, they will be well adapted for, they must now be kept back as required, introducing a few at a time into heat; but whilst they are comparatively young, no severe retarding should be employed, as it has a tendency to induce a stunted condition, which it is difficult to get them out of. The plants should receive 3-in. larger pots each year until they get into such as are 15 in. or 16 in. across, when by the use of a little manure-water they can be kept in good condition. All through the existence of these plants, an immunity from insects is the first consideration, as, if ever allowed to suffer from thrips or red-spider, it has the effect of producing a stunted condition that prevents their making any satisfactory progress.—T. Baines, *Southgate.*

## PRIMULA CORTUSOIDES AMŒNA AND ITS VARIETIES.

WE find that *Primula cortusoides amœna*,* as well as *amœna alba*, and *amœna lilacina*, grown in pots, are great acquisitions, coming into bloom early, and enlivening the front lines of conservatories, when mixed with Tulips, Lily of the Valley, &c. The large trusses are also in demand for cut flowers, for which they are well adapted. When they have done flowering, let all the pots be got to the potting-bench and the plants examined and repotted, using good rich loam, with leaf-mould and sand. When potted, plunge them in a shady corner where the mid-day sun will not strike them. Let them be well attended to with water throughout the summer when dry, giving manure after the pots become full of roots, but withholding it when there are signs of the foliage getting yellow. They should at this stage be lifted and stood in a cold frame if convenient, but this is not really necessary, and if very sharp frost should come a good sprinkling of litter may be thrown over them. If in a frame, never let them get dry; and when they begin to grow give more water, raise them close to the glass, and give plenty of air to keep the foliage strong and dwarf. If they are allowed to get partially into bloom in the frame before they are taken to the conservatory, they last longer than when excited into flower with a little heat. There are several forms of *Dianthus hybridus* which are useful at the same time, both for cutting and decoration. I can speak highly of *D. hybridus Highclere*, which, treated like the above, has been much used for button-holes.—A. H., *Thoresby.*

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* Professor Morren separates this *Primula* and its varieties from *P. cortusoides* under the name of *P. Sieboldii.*

## CATTEL'S ECLIPSE BROCCOLI.

MOST gardeners know the importance of having a good late Broccoli to shake hands with the earliest Cauliflowers, but I am not sure whether this variety is sufficiently well known, as it should be, for this special object. It is certainly the latest I know of, and late enough for this part; not one of them is as yet (April 23) showing signs of flowering. It is a very hardy, robust sort, and one which it is in every way desirable to have where a good Broccoli is at all appreciated.—H. KNIGHT, *Floors.*

## STRAWBERRY-FORCING.

I CAN endorse what Mr. Gilbert says (p. 100) in regard to his earlier crops of Strawberries in Pots, having seen them some weeks ago. They were then in excellent condition, and all the successions promised to do equally well. It might be profitable to the readers of the POMOLOGIST if Mr. Gilbert would give us a little more of his experience in Strawberry-forcing—for example, what kinds he finds the most productive, the time they take from the starting to the picking of the fruit, the best-flavoured, &c. Such information might appear superfluous to some, but coming from the pen of one who decidedly stands in the first rank of cultivators, it cannot but be acceptable to readers in general.

Not only is Strawberry-growing done well at Burghley, but all the produce there is managed in the same high-class style. One thing which particularly struck me under glass was the quantities of French Beans, so long and tender, growing in small pots. They appeared to be a speciality with Mr. Gilbert. [Will he kindly also explain his treatment of these?—ED.] I should be glad to learn what is his opinion of the plan of growing Strawberries in pits or houses, plunged in a gentle bottom-heat, compared with the common method of growing them on shelves. In my own case, the former system has proved at least to be equal to the latter, with a great reduction of labour, and finely-flavoured, high-coloured fruit have been produced. We have grown over a thousand so plunged, and I am encouraged to continue the practice, so far as pits can be spared. Mr. Speed, in his Strawberry-house at Chatsworth, grows a large proportion of his stock in this way, with great success.

This season we had a few lights to spare after the Strawberry-pots were in their quarters, and a quantity of (old) plants of President were lifted from the open ground, brought on gently in the pits till they were set, and afterwards driven at a rapid pace till colouring began. The result was, that great quantities of fair-sized fruit have been gathered: more than three times the weight of fruit has been ripened, as compared with those in pots in the same space. I think for late crops much of our labour might be lightened by preparing plants in the open ground, running the spade round them in September, lifting them, and placing nice soil compactly round their roots in the pits or frames; while in February, manure-water applied after the fruit is formed, does much to secure large fruit. Though there may be nothing new in this, the practice is sound.—M. TEMPLE, *Blenheim.*

## HARDY FRUIT CROPS IN NORTH NOTTS.

SELDOM have the uncertainty and irregularity of our climate been more remarkably experienced than within the last three weeks. In the last week in April, the weather was as warm as in June or July, but a change of wind to the north-east on the 29th, brought down the temperature so that we had slight frosts in the mornings. On the 2nd of May the thermometer here in the morning was as low as 27°, or 5° of frost, and at Ollerton and Budby, near this, 10° and 12° of frost are reported to have occurred on the same morning. The thermometers of the observers in these localities may, however, want correcting at Kew or Greenwich before this low temperature can be taken as strictly accurate. Up till this date in May (the 11th) the wind still keeps easterly, with slight frosts in the mornings, and with some hail-showers on the 8th and 10th.

I have never before seen the trees of Plums, Cherries, and Pears in gardens and orchards so abundantly clothed with bloom as they were this year; and the fine, warm, forcing weather in April was favourable for the setting of the fruit. Legions of aphides and grubs are, however, now busy preying on the foliage and young fruit set, and in such weather these pests seem more ravenous, and multiply faster than when it is warmer. The Apple-trees are now in full flower, and the cold, frosty mornings must have injured the bloom to a certain extent; but there is abundance of it, and a good crop of this invaluable fruit may yet be grown. The small, hardy bush-fruit, such as Gooseberries and Currants, have only been injured on the tops of the bushes, for the fruits set below were well protected by the foliage. The keen frosts in the beginning of May turned all the flowers opened on the early Strawberries quite black in the centre, and of course made the fruit abortive, but the later-flowering varieties are not quite out in bloom yet, and will stand a better chance, should a change of weather come soon.

The severe frost on the morning of March 11 did not injure the blossoms of Apricots, Peaches, and Nectarines so much as was expected, even on walls not protected. This must have been owing to the dry weather which prevailed in the first portion of the month, making the walls, trees, and ground below them so dry and warm that the 15° of frost had less power to injure any of the blooms close to the wall. I have been thinning lately the fruit off the trees of Apricots and Peaches on a wall not at all protected, and have left a full crop on. The Kaisha Apricot, especially on this wall, has set its fruit more plentifully than any of the other varieties, and I have observed this before in other years with frosty springs, so that I reckon this variety one of the hardiest of Apricots. On the Plum-walls, Rivers' Early Favourite, Dovebank, Mimms, and Kirke's have set their fruit in abundance, but other later sorts have likewise plenty of fruit set. Of Cherries on the walls, the Early Heart is covered with fruit now of a good size; and two American kinds, Ohio Prince and Governor Wood, are likewise well-cropped. Pears on the walls are all set very thickly, and the grubs now swarming on the foliage will help to thin some of the fruit, and save the thinning by hand.—William Tillery, *Welbeck.*

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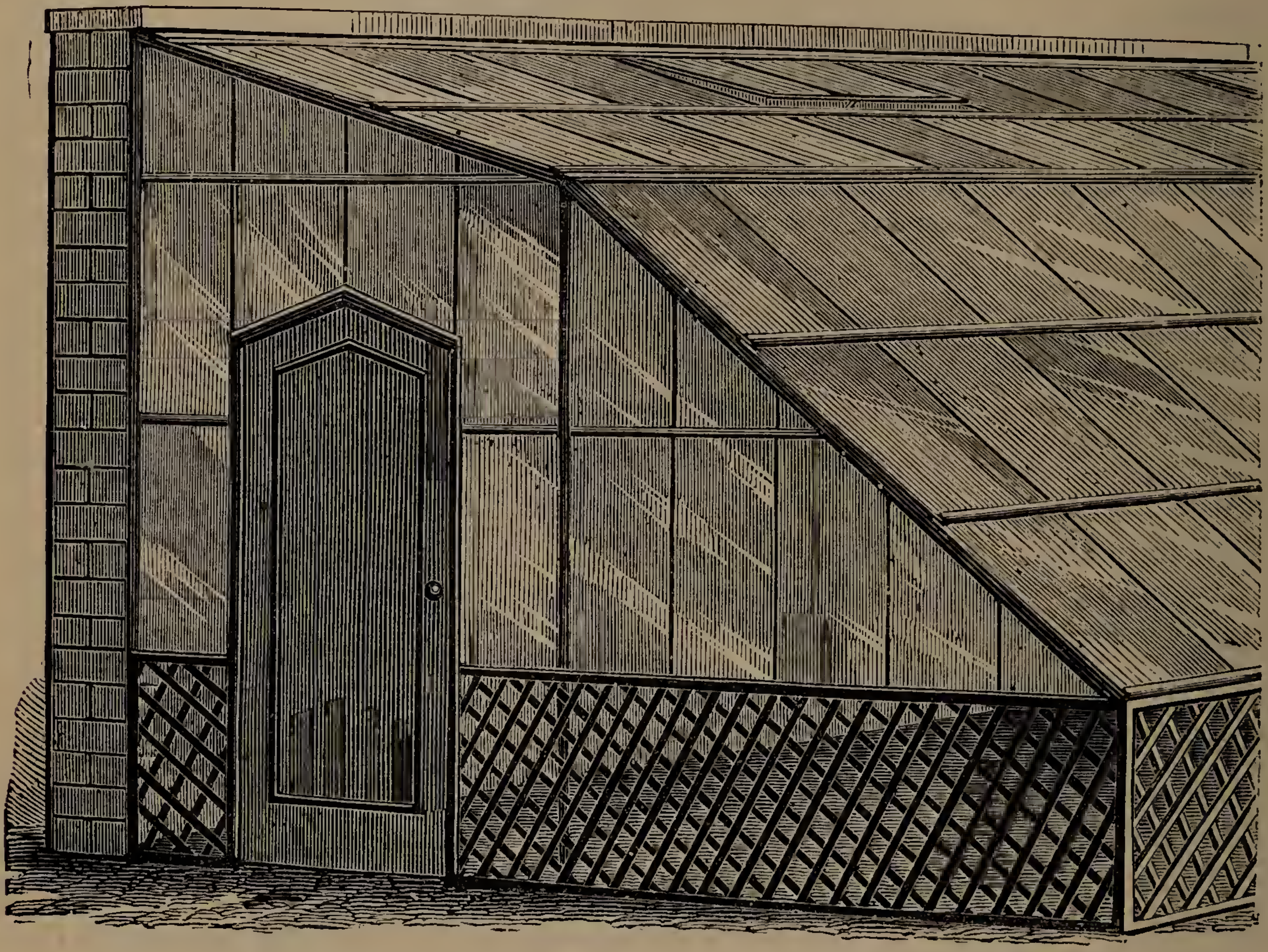
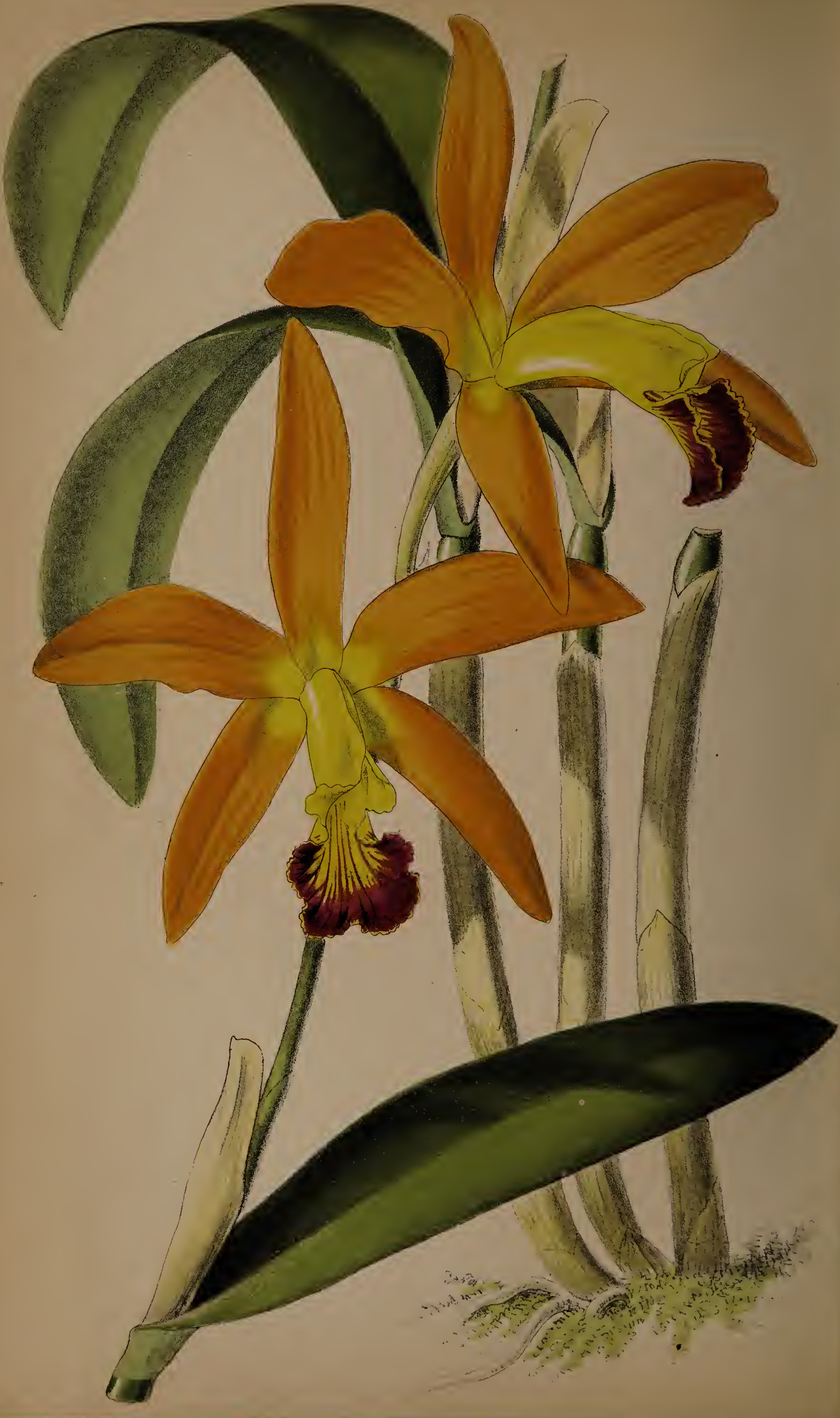


## RENDLE'S RUSTIC PLANT-HOUSES.

ON various occasions we have made allusion to some one or other of Mr. Rendle's structures, which have appeared to us deserving of notice. Just at this season, the rustic house of which we introduce a figure commends itself as highly useful for a variety of purposes, as a cool summer house. It was originally intended for fruit-culture, and is called an orchard-house, but the abundant light and free ventilation which can be provided, suggest that it might be turned to a variety of uses. Such a house could easily be fixed up against any existing wall. Mr. Rendle himself recommends them as the best Peach-houses ever introduced, because besides their cheapness and durability, the trellis-work base could, while the trees were in bloom, be covered in with canvas if necessary, while the canvas could be as readily removed, and a full supply of air admitted during the swelling of the fruit.

A low house of this description, not too large, would be most convenient for growing green-house specimens requiring protection from the rains and storms of



our fickle climate, but also requiring as free a circulation of air as possible during the warm season. It would, in fact, provide all the advantages of cold pits, while it would be much more convenient. In winter, such a structure would be certain to find its use as a mere shelter for hardy things which it is not desirable to leave exposed, such as shrubby plants in preparation for being forced. In a north aspect, such a house would be one of the best that could be contrived for retarding or prolonging the duration of exhibition plants.—T. M.

## TRITELEIA (MILLA) UNIFLORA IN POTS.

HAVING grown this plant in pots for several years, I can fully endorse all that your correspondent Mr. Dean says (p. 86) respecting its adaptability for decorative uses ; I may add that the blooms are much prized amongst cut flowers. When used along with *Poinsettia pulcherrima* and a few sprays of fern-fronds, they make a cheerful mixture in glasses about February, and as they continue to bloom freely for a considerable time, a succession may be had for a long time by retarding a few pots. We find that if it is too much forced, the foliage gets drawn, and the blooms are neither so fine, nor do they last so long as when allowed to grow in a cool house.—A. H., *Thoresby.*

## LÆLIA FLAMMEA.

WITH AN ILLUSTRATION.

IMAGINE a flower of *Lælia cinnabarina* increased three times, with its brightest vermilion ; give it a splendid yellow lip, with an amethyst-purplish wavy anterior lacinia, and a small white column washed under the stigma with purple : thus you have the first-rank beauty, raised by Mr. Seden, at the Royal Exotic Nursery of Messrs. Veitch. Such is Professor Reichenbach's word-painting of this strikingly beautiful hybrid orchid, which, on account of its uncommon and effective colouring, is one of the most welcome amongst the new acquisitions. We have to thank the Messrs. Veitch and Sons for the specimen which Mr. Fitch has sketched in the accompanying very faithful portrait. It was raised between *Lælia cinnabarina* and *L. Pilcheri*, the former being in all probability the seed-parent ; and it was awarded a Botanical Certificate equivalent to one of the First-class, at the Royal Botanic Society's Spring show on the 25th of March last.

The plant, as will be seen from our illustration, is of moderate stature, and has slender cylindrical stems, each terminating in a solitary ligulate oblong fleshy leaf. The peduncles are terminal, somewhat elongated, and bear one or two flowers, possibly more ; the individual flowers are some four inches across, with ligulate acute sepals and petals of a brilliant cinnabar-orange colour ; while the lip, which is oblong and trifid in front, has the yellow side-lobes folded over the column, and the intermediate one rounded, denticulate, somewhat crisped, and of a rich crimson hue, passing into crimson veins on the disk.

It will no doubt be as easy to cultivate as its progenitor *L. cinnabarina*, while from its brilliant beauty it will no doubt be much sought after.—T. MOORE.

## PLUMBAGO ROSEA.

THIS beautiful plant is not met with so often as it should be, as it is one of the finest winter-blooming stove plants in cultivation. If a young plant is started into growth in May, in a temperature of from 60° to 65° at night, and from 70° to 75° by day, a nice plant may be grown in one season. In potting, let plenty of drainage be placed in the pot, and over this put some rough fibry peat, to prevent the drainage getting choked. For soil break up some fibry peat in pieces about the size of Hazel-nuts; to this add about one-fourth its bulk of good loam, and sufficient silver-sand to keep the whole porous. Use a pot two sizes larger than the one the plant is taken from; pot moderately firm, and be rather sparing with water at the root until the plant shows signs of growth, but syringe well night and morning.

When the young shoots have grown to four or five joints in length, stop them at either the fourth or fifth joint, according to their strength. Use the syringe freely, and do not let the plant suffer for want of water at the root. As soon as the second growth is starting from the eyes to which they were pinched back, give another shift, using soil as before advised, and treat the plant, as to temperature and syringing, in every respect as before. As soon as the roots have well got into the new soil, use a little weak manure-water once a week until the flower-spikes begin to form. When the flowers begin to open, remove the plant to a rather drier atmosphere, and by gradually reducing the temperature, the plant will become sufficiently hardened to stand in a warm conservatory for some time whilst in bloom. After blooming is over, cut off the old flower-spikes, and start the plant as before. The thrips is a great pest to this plant, and must be kept down by fumigating or washing the foliage by hand.—HENRY CHILMAN, *Somerley.*

## NOTABLE NEW PLANTS AND FLOWERS.

[F.C.C. = First-class Certificate; B.C. = Botanical Certificate; F.C. = Floricultural Certificate.]

ACER JAPONICUM VITIFOLIUM [B.C.].—A distinct variety, with broad-lobed leaves (nine lobes) of a light green colour.—*Messrs. Veitch & Sons: R.B.S., April* 22.

ACER PICTUM BICOLOR [B.C.].—A broad-leaved hardy tree; the leaves handsomely blotched and flaked with white, and cut into seven shallow acuminate lobes.—*Mr. R. Smith: R.B.S., May* 20.

ACER POLYMORPHUM FLAVESCENS [B.C.].—A neat variety with seven-lobed leaves, and oblong-obovate acuminate yellowish leaflets with green ribs.—*Messrs. Veitch & Sons: R.B.S., April* 22.

ACER SEPTEMLOBUM BICOLOR [B.C.].—A handsome Japanese Maple, the broad-lobed leaves being coloured bronzy-purple and pale rose-red.—*Mr. R. Smith: R.B.S., May* 20.

ACER SEPTEMLOBUM ELEGANS [B.C.].—In this variety, the narrow-lobed leaves are green, slightly tipped red.—*Mr. R. Smith: R.B.S., May* 20.

ACER SEPTEMLOBUM MARGINATUM [B.C.].—This has leaves margined with white reticulation; elegant habit of growth.—*Mr. R. Smith, R.B.S., May* 20.

ADIANTUM GRACILLIMUM [F.C.C.].—A very elegant stove fern, related to *A. cuneatum*, of somewhat dwarf growth, the minute divisions making it very useful for cut purposes.—*Mr. B. S. Williams: R.H.S., May* 13; *R.B.S., May* 20.

AGAVE FILIFERA SUPERBA [F.C.C.].—The finest of the thread-leaved Agaves, with remarkably stout, short leaves, nearly two inches in breadth, bearing white threads on the margin.—*Mr. J. Croucher: R.H.S., May* 13; *R.B.S., May* 20.

AGAVE MICRACANTHA PICTA [F.C.C.].—A distinct plant, having finely serrated glaucous leaves, up the centre of which is a broad white band.—*Mr. J. Croucher: R.H.S., May* 13; *R.B.S., May* 20.

AGAVE LEOPOLDII [B.C].—A dwarf variety of the Verschaffeltii type, with the long brown terminal spines twisted.—*Messrs. Veitch & Sons: R.B.S., April* 22.

AGAVE MARMORATA [B.C.].—A very interesting species, in which the stoutish spined leaves are cross-banded with grey.—*Mr. J. Croucher: R.B.S., May* 20.

AMARYLLIS (HIPPEASTRUM) MOOREANA [F.C.].—A fine variety, with the flowers deep blood-red; very striking, and of fine form.—*Mr. B. S. Williams: R.B.S., April* 22.

AMARYLLIS (HIPPEASTRUM) VIRGINALIS [F.C.].—In this, the flowers are creamy white, the throat tinted with green, a valuable addition as a white variety, though wanting in form.—*Mr. B. S. Williams: R.B.S., May* 20.

ANTHURIUM FLORIBUNDUM.—A neat, free-growing stove herb, possibly a *Spathiphyllum*. The leaves are oblong, apiculate, and the spathes white and reflexed.—*Mr. B. S. Williams: R.B.S., May* 20, 1873.

AQUILEGIA (CHRYSANTHA) LEPTOCERAS LUTEA [F.C.C.].—A beautiful and extremely showy hardy perennial from North America, its large golden-yellow long-spurred erect flowers produced in great abundance, from densely tufted plants, which maintain a long succession of bloom.—*Mr. J. Douglas: R.H.S., May* 13.

ATHYRIUM FILIX-FŒMINA CURTUM CRISTATUM [B.C.].—A pretty and distinct Lastrea-like fern, with the pinnules and pinnæ short and blunt, and the pinnæ and frond densely but bluntly tufted.—*Messrs Ivery & Son: R.B.S., May* 20.

AZALEA DUKE OF EDINBURGH [F.C].—A very striking salmon-red, spotted slightly on the segments; smooth, very large, stout and bold, free, and of the finest form.—*Mr. A. Parsons: R.B.S., April* 22.

AZALEA MOLLIS ALPHONSE LAVALLÉE [F.C.C.].—A fine orange-salmon coloured variety of a fine hardy shrub, with well-formed flowers, in large, showy trusses; a fine decorative plant for pots or borders.—*Messrs. Lane & Son: R.H.S., May* 13.

BETULA ALBA PURPUREA [B.C.].—A variety of the common Birch, in which the leaves are of a dark purplish hue.—*Mr. W. Paul: R.B.S., April* 22.

BORONIA ELATIOR [B.C.].—A greenhouse shrub of distinct aspect, having an upright spare growth, pinnate leaves, and convergent flowers of a lively rosy-red hue.—*Messrs. Veitch & Sons: R.B.S., May* 20.

CLEMATIS DUCHESS OF EDINBURGH [F.C.].—A pure white double-flowered variety, with flowers of medium size and immense depth, very free, and of vigorous habit.—*Messrs. G. Jackman & Son: R.B.S., April* 22.

CLEMATIS MRS. MOORE [F.C.].—A fine variety of the early-flowering lanuginosa type, with large satiny-white flowers, slightly tinted with mauve.—*Messrs. G. Jackman & Son: R.B.S., April* 22.

CLEMATIS MORIKATA OKÉ [F.C.].—Remarkable for its fine form; very delicate mauve, the flowers large, and eight-petaled, of the early-flowering lanuginosa section.—*Messrs. G. Jackman & Son: R.B.S., April* 22.

CLEMATIS ROBERT HANBURY [F.C.C.].—A grand variety of the early-flowering lanuginosa section, with massive lustrous blue-mauve flowers of large size, fine shape, and great beauty.—*Messrs. G. Jackman & Son: R.H.S., May* 13.

CLEMATIS SIR GARNET WOLSELEY [F.C.].—A showy variety of the patens type, pale blue, with a plain red bar along each segment; good form and very free.—*Messrs. G. Jackman & Son: R.B.S., April* 22.

CROTON OVALIFOLIUM [B.C.].—A distinct and handsome variety, with oblong-oval leaves, with blunt rounded ends, marked with yellow veins.—*Messrs. Veitch & Sons: R.B.S., April* 22.

CYPRIPEDIUM HARRISIANUM [B.C.].—A fine hybrid between *C. barbatum* and *villosum*, with tesselated leaves, and handsome flowers, having a port-wine coloured lip.—*Messrs. Veitch & Sons: R.B.S., March* 25.

DRACÆNA HENDERSONI [B.C.].—A pretty variety, with the leaves marked with streaks of pink and crimson.—*Messrs. Veitch & Sons: R.B.S., April* 22.

ECHEVERIA EXIMIA [B.C.].—A pretty dwarf half-hardy succulent, like a magnified form of *E. glauca.* The glaucous obtuse apiculate rosulate leaves are an inch and a half broad.—*Messrs. E. G. Henderson & Son: R.B.S., May* 20.

ECHEVERIA PEACOCKII [B.C.].—A handsome Californian pulverulent species, with a pleasing rosette-like growth of obovate erect leaves.—*Mr. J. Croucher: R.B.S., May* 20.

GYMNOGRAMMA TRIANGULARIS [B.C.].—A beautiful Californian greenhouse Fern, of tufted habit, attaining a height of from 6 to 12 inches, with triangular fronds, clothed with yellow beneath.—*Mr. B. S. Williams: R.H.S., May* 13.

HÆMANTHUS ROOPERI [F.C.C.].—A tall-growing greenhouse bulb, with deep heads of reddish orange-coloured flowers, and prominent yellow anthers; a variety of *H. insignis.*—*Messrs. E. G. Henderson & Son: R.H.S., May* 13.

HYPOLEPIS BERGIANA [B.C.]. — An elegant, erect-growing, and distinct S. African fern, with finely-cut triangular hairy fronds; promising to be very useful, both for exhibition and decorative purposes.—*Messrs. Rollisson: R.H.S., May* 13.

MAMMILLARIA ROEZLIANA LONGISPINA [F.C.C.].—A distinct dwarf Cactus, covered with peculiar grey spines fully 2½ in. in length.—*Mr. J. Croucher: R.H.S., May* 13; *R.B.S., May* 20.

PELARGONIUM (SHOW) ARCHDUCHESS [F.C.].—A large bold painted flower; the lower petals stained and pencilled with dark; dark top petals, and large white throat.—*Mr. Nye: R.B.S., May* 20.

PELARGONIUM (SHOW) DUCHESS OF EDINBURGH [F.C.C.].—An invaluable decorative and forcing variety, wonderfully dense and free, producing large trusses of crispy-petaled white flowers, blotched with purple.—*Mr. Braid: R.H.S., May* 13.

PELARGONIUM (SHOW) PRESBYTER [F.C.].—Orange-red lower petals, with slight maroon blotch on each; dark top-petals, margined with pale rose; conspicuous white throat.—*Mr. C. Turner: R.B.S., May* 20.

PELARGONIUM (FANCY) MRS. HART [F.C.].—Bright rose, with large white throat; paler towards the edges, fine quality.—*Mr. C. Turner: R.B.S., May* 20.

Pelargonium (fancy) Rosy Morn [f.c.].—Pink, shaded with rose, and wire-edge of white, striking white throat; fine form.—*Mr. C. Turner: R.B.S., May* 20.

Pelargonium (fancy) The Shah [f.c.].—Rose-shaded maroon, and wire-edge of pinkish white; form, extra fine.—*Mr. C. Turner: R.B.S., May* 20.

Polyanthus purpureus [f.c.c.].—A fine large crimson-purple fancy or bedding variety; the pips of great size, and forming a bold truss.—*Mr. R. Dean: R.H.S., April* 1.

Rose (h. p.) Perle des Blanches [f.c.].—A very free-flowering pure white variety, producing its flowers in large clusters, and well adapted for garden decoration.—*Mr. W. Paul: R.B.S., April* 22.

Rose (h. p.) St. George [f.c.].—Shaded crimson, a fine full globular flower of excellent quality.—*Mr. W. Paul: R.B.S., April* 25.

Rose (tea) Duchess of Edinburgh [f.c.c.].—A fine high-coloured variety in the way of Cheshunt Hybrid, with large globular flowers of a rosy lilac-purple hue, and very fragrant.—*Messrs. Veitch & Sons: R.H.S., May* 13.

Rose (tea) Mdlle. Marie Arnaud [f.c.].—A charming pale-yellow flowered variety, of the build of Maréchal Niel, and of a soft and pleasing glow of colour. —*Mr. W. Paul: R.B.S., April* 22.

Viola White Swan [f.c.c.].—A large-flowered pure white variety of the lutea-grandiflora section, very free, remarkably early, and continuing in blooming; will be of great value in spring gardens.—*Mr. R. Dean: R.H.S., May* 13.

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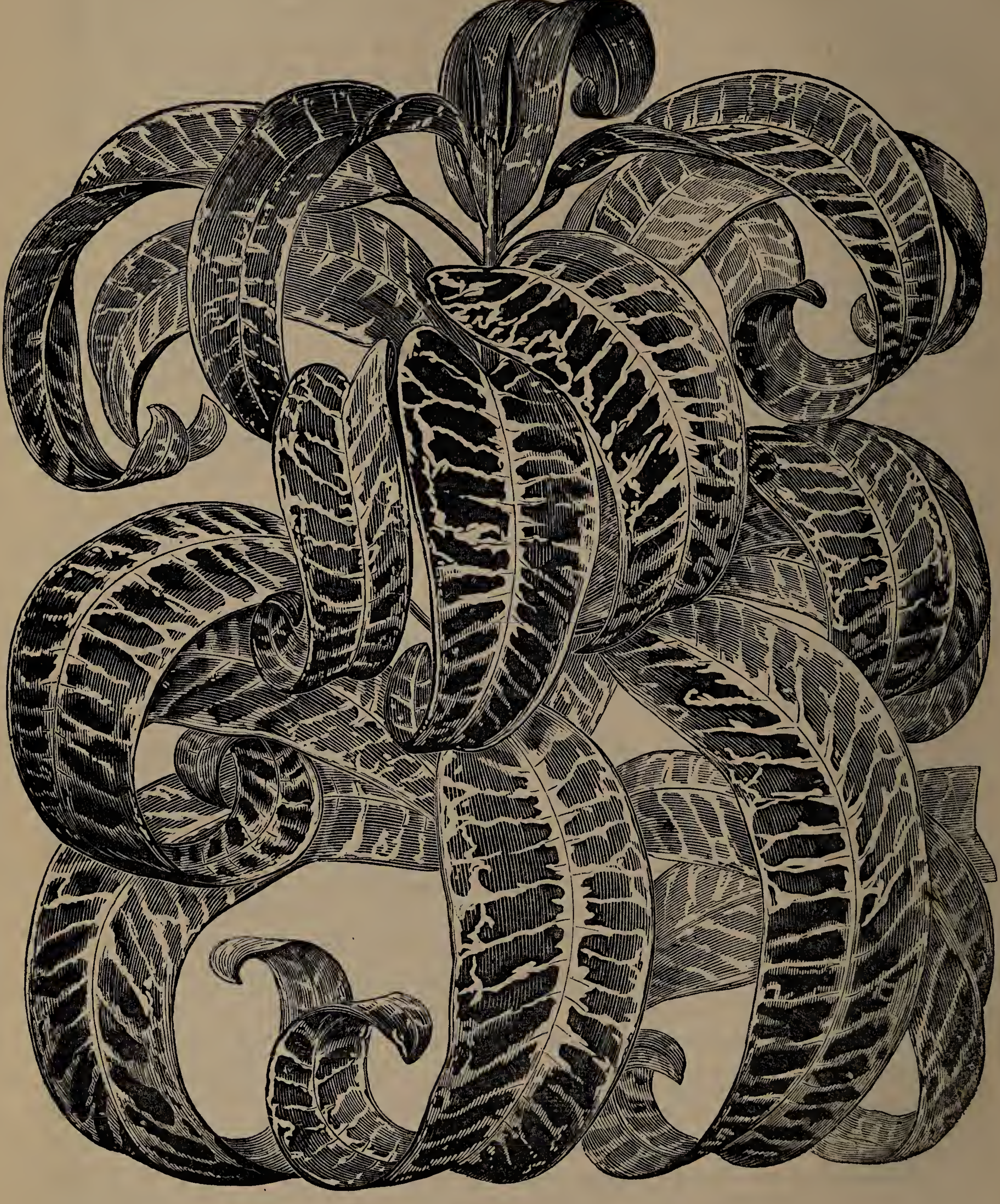
## THE GARDEN LYCOPODIUM DENTICULATUM HARDY.

THIS plant, now so common in our stoves and greenhouses [known also as *Selaginella denticulata*, but more correctly as *S. Kraussiana*, the true *S. denticulata* being quite different], is, I presume, very much hardier than many cultivators of it are aware of. In the summer of 1870, a large plant of *Agave americana variegata* was turned out into a subtropical bed in the flower garden. Round the edge of the pot, which was about two-thirds sunk into the bed, was growing a healthy batch of this Lycopod, covering the upper portion of the pot so as nearly to render it invisible. While in this open-air position it had established itself on the ground adjoining, where it remained undisturbed until the following spring, when I was astonished to find, while the men were digging over the bed, some plants fresh and green, which had lived through about six weeks' frost of such severity, that it had penetrated freely a foot deep into the ground. This severe test of its hardiness induced me to make a trial of it as a hardy edging plant. The place chosen was round some stone-work forming a margin to a hardy fernery. In case of its not succeeding, it was mixed alternately with a hardy dwarf *Sedum*. The situation has, however, suited it so well, that it has remained undisturbed for the last three years. The growth through the summer months is very dense and compact; and it forms a pretty and interesting edging for the fernery, in connection with the *Sedum*. The beds are well drained by stones and brick-bats, and the soil light and open. The situation is well sheltered, but with full exposure to the mid-day sun.—J. Webster, *Gordon Castle*.



## CROTON VOLUTUM.

THIS is one of the finest and most distinct of the many new Crotons which have during recent years been added to our gardens. It is, as will be seen from the annexed figure, borrowed from Mr. Bull's Catalogue, a variety of vigorous habit, with handsome golden variegation, its peculiarly curved leaves being twisted in a way which gives them the appearance of a ram's horn. Mr. Bull describes it thus :—A very distinct-looking and beautiful form of the multifarious *Croton* or *Codiœum*, the great peculiarity of which consists in the leaves being rolled up from the end in a volute, after the manner of the curving of a ram's horn. The leaves are six inches long, and an inch and a half or more in breadth, and beautifully coloured. The ground-colour is a deep green; a golden bar of a quarter of an inch wide runs down the centre, from which yellow veins diverge at about half-inch intervals, and meet near to and so as to coalesce with the golden margin, in which occur irregularly scattered green spots. The markings are very regular, a little pink sometimes appearing in the midrib. The curving of the leaf-blade is also very constant, causing the edges to be elevated so as to form a kind of channel. The bark of the young shoots is also variegated with yellow. This will prove one of the most beautiful and effective amongst the many fine forms, which have come to us from the islands of the South Seas. It has received a First-class Certificate from the Royal Horticultural Society, under the temporary name of *cornigerum*, which is not properly applicable to it.—T. M.

## GARDEN GOSSIP.

THE event of the month has been the *International Exhibition at Florence*, which was held in the New Market, a building admirably adapted for the purpose for which it is ultimately destined, but too large for the exhibition, since, like our own Crystal Palace, it had the effect of dwarfing the plants. To some extent this impression was removed by the central fountain, a single simple jet, which, rising from a white marble basin three-fourths of the height of the building, produced a really imposing effect. The general grouping of the plants was simple and effective. The most remarkable exhibits were the gorgeous Crotons of Prince Demidoff, the stove plants of Marquis Torrigiani and Marquis Corsi-Salviati, the Agaves and the noble Bamboos of Signor Fenzi, the collections of MM. Linden and Dallière, and the New Plants of Messrs. Veitch. The Orchids and Specimen Greenhouse Plants were not equal to what we see at our own shows. Florists' flowers in general were very poor, but Roses were good, and Fancy Pansies unusually excellent. Art and taste in design were, as might be expected, everywhere manifest in the fountains, garden ornaments, flower-pots, and the like. The form of the building is nearly square, and the arrangement of the contents may best be described by stating that there is a central nave and two side aisles connected by transepts at either end. The arrangement was effective, and a happy compromise between the severe utilitarianism of our English system, with its abrupt grouping, and the pictural arrangements often met with on the Continent. At the far end, opposite the entrance, was a lofty rockwork, rising from a subalpine forest of Azaleas, and formed of tufa, over which poured a cascade. In among the blocks fell double Banksian Roses, both buff and white, in graceful masses; Conifers and other shrubs sprung from between the projecting bluffs, and the whole formed a most pleasing group. The separation between the nave and aisles was formed by fine beds of Palms, Cycads, Pandanads, Tree Ferns, &c., these being edged for the most part with Ixia crocata, grown in pots and plunged; this plant giving an effective fringe of colour. Outside the main building was an open space planted as an ornamental garden, and containing also some remarkable exhibits. It was perhaps to be regretted that some of the grand objects, such as the noble masses of hardy Bamboos, were not utilised in the interior. We hear that proposals have been made to hold an *International Exhibition* in London in 1876; and there is no doubt that such a gathering would be well supported in this country, if carried out in the same catholic spirit as was that of 1866.

—— SPECIMENS of *Coleus The Czar*, sent to us by Mr. Cannell, show it to be a new and very distinct type of Coleus, of great beauty. The leaves have the rich colouring of the green and golden varieties exquisitely blended in a varying manner. Sometimes the leaf is mainly of an intense velvety maroon, flushed with bright rose, giving a kind of shot-crimson hue, the edge being just banded with green. In other cases, half the leaf is of a deep rosy crimson, with golden beaded edge, and sometimes the rosy and the maroon-crimson tints are variously streaked and blended. The flush of rosy crimson appearing in the maroon gives a remarkable velvety richness, which must be seen to be appreciated; but the colouring is so rich and varied, that, if constant, the plant must be exceedingly effective.

—— In the garden of the Villa Ada, on Lake Maggiore, the *Chinese and Japanese Bamboos* form a group of plants of remarkable beauty. Their real decorative value, observes Professor Koch, in some notes on this beautiful Italian garden published in the *Gardeners' Chronicle*, can only be realised when seen out-of-doors in such luxuriance as they present here, which causes me to regret that they will not bear our winters in Germany. But I should think they would stand out in England very well, and they should therefore be more extensively employed than I have observed, at least, in the public gardens and parks of London. The rapid growth of these grasses may be illustrated by a four-year-old plant of *Bambusa mitis*, which measures 12 ft. through by 20 ft. high, whilst a plant of *Arundinaria falcata* has reached a height of 12 ft. in the same period.

—— The following is one mode of preparing *Dried Cherries* :—The fruit should be put into a slow oven and thoroughly dried; then before they begin to change colour, they should be taken out of the oven, tied in bunches, and stored away in a dry place. In the winter they may be cooked with sugar for dessert, the same as Normandy Pippins. Particular care must be taken that the oven be not too hot. Another method of drying Cherries is to stone them, and to put them in a preserving-pan, with plenty of loaf-sugar strewed amongst them. They should be simmered till the fruit shrivels, when they should be strained from the juice. The Cherries should then be placed in an oven, cool enough to dry without baking them. About 5 oz. of sugar would be required for 1 lb. of Cherries, and the same syrup may be used again to do another quantity of fruit.

—— Among *Tea Roses*, some desirable novelties have been seen at the Shows during the present season. One such was *Madame François Janin*, which obtained a First-class Certificate, and which is a free-growing, free-flowering, medium-sized or small flower, a most beautiful Rose in the bud, deep yellow in colour, and of the very first class for cutting for button-holes and bouquets, in which respect it will probably be found without a rival. It proves also to be a capital pot Rose. There have been some other new, or comparatively new, Roses shown at South Kensington this spring. *Catherine Mermet*, a comparatively new variety, has been shown in splendid form; and looking at it from all points, there is, perhaps, no other Tea Rose equal to it. It is exquisite in form, apparently very constant, and a good healthy grower. Another charming Tea Rose is Messrs. Veitch's *Duchess of Edinburgh*, which has been shown in very fine form indeed, and was most deservedly awarded a First-class Certificate; a dark red Tea Rose, large in size, well-shaped, robust in habit, and most floriferous, is certainly a gem of the first water.

## Obituary.

—— Mr. John Salter, formerly of the Versailles Nursery, Hammersmith, died on May 10, at the good old age of 76. Mr. Salter, whose name is a household word amongst the cultivators of Chrysanthemums and hardy variegated plants, was one of the founders of the Metropolitan Society of Florists and Amateurs, which was established in 1832; and at the Dahlia show of this Society held in that year he gained his first medal. In the year 1838 he went to reside at Versailles, France, and there applied himself to the improvement of the Chrysanthemum, Annie Salter and Madame Poggi, raised in 1844, being the most remarkable in his first batch of seedlings; Queen of England, and other fine sorts quickly followed. The little Chusan Daisy, sent from China by Mr. Fortune, was introduced into France by him, and from it sprang all the Pompon varieties now cultivated. The troubles of the French Revolution in 1848 having compelled him to leave Versailles, he settled at Hammersmith, and there he continued the cultivation of the Chrysanthemum. In 1865 Mr. Salter published his experience, in an illustrated volume entitled *The Chrysanthemum, its History and Culture.* The Pyrethrum (roseum) was another of his favourite flowers. Many of the fine double varieties now cultivated are the result of his perseverance. In 1869 Mr. Salter, already in failing health, retired from business. An attack of paralysis in February, 1873, greatly enfeebled him, and a second stroke in May, 1874, proved fatal. Thus peacefully passed away one of the kindest and most amiable of men; and one of the most renowned of our old florists.

—— MR. GEORGE GLENNY, of floricultural fame, died on May 17 at Gipsy Hill, Norwood, aged 81, after a week's illness. From his earliest years he was a great lover and a good cultivator of flowers, and he soon gave up business, and devoted himself to literature and floriculture, amongst which he passed a most active life. He was the founder of the original garden newspaper, the *Gardener's Gazette*, which for several years he conducted. He was one of the founders, in 1832, of the Metropolitan Society of Florists and Amateurs, a society to which is to be attributed much of the advance which has been made in the improvement of flowers during the last forty years; he was also one of the founders (Mr. John Keynes, of Salisbury, being another), in 1839, of the Gardeners' Royal Benevolent Institution. Though a voluminous writer in various periodicals, it was on the authorship of the *Properties of Flowers and Plants* that he most prided himself. Mr. Glenny, who was also the author of various small popular works, was an original and powerful, but too often acrimonious, writer. During the last few years of his life his literary work has been chiefly confined to the preparation of his *Almanac*, and his contribution to *Lloyd's Newspaper*.

# GARDEN WORK FOR JUNE.

## FLOWERS.

UP to the time at which I write (May 12), the severity of the weather continues. This has told perceptibly upon vegetation, which being in such an advanced state, now presents a seared and weather-beaten aspect. Without an immediate change in the weather, the planting-out of half-hardy plants must be delayed. The ground must be frequently forked up in the beds for the reception of subtropical and other tender plants, which may be planted out towards the middle of the month. As regards the disposition of these plants in the flower garden, much will depend upon the shelter they receive; this should always be borne in mind, and such subjects as are somewhat hardy and resist wind should be put in the most exposed positions. In planting *Alternantheras*, more particularly the highly-coloured *A. amœna*, it is necessary to have a prepared free soil, and to plant sufficiently thick to secure immediate effect. *Coleus Verschaffeltii splendens* also requires to be planted thickly, as it grows but sparingly out-of-doors, but it is a most charming variety. After planting, water freely to settle the soil, and when somewhat dry, stir the surface and mulch with partially decayed dung and leaf-soil, which will save much labour in watering. This mulching may be extended to various subjects, such as *Calceolarias*, *Variegated Pelargoniums*, &c., with beneficial results. Unremitting attention must be given to the training of climbers, and the pegging-down and pinching-back of such plants as may require it; also to the timely staking of all kinds of border plants requiring support. Take up the roots of *Anemones* and *Ranunculuses* as soon as the leaves die down, and dry and store them.

Recently planted trees and shrubs must have attention in watering, mulching the surface over the roots. *Roses* are at this season liable to become infested with green-fly, which must be kept under by means of the syringe; assist them with good soakings of manure-water, which will vastly improve both growth and bloom. Pick off the seed-pods from *Azaleas*, *Kalmias*, and *Rhododendrons* as the blooms decay. Make successional sowings of *Mignonette, Sweet Peas*, and other choice Annuals for autumn flowering, freely thinning-out such as may require it, as Annuals are most generally spoiled by being crowded. Sow seeds of *Brompton* and *Queen Stocks*, which are worthy of a more extended culture, as they are so valuable for cutting from during the spring months. Rock-work, ferns, and Alpine plants will be benefited by repeated waterings during dry weather, and several of the strong-growing varieties, such as *Scolopendrums* and *Osmundas*, cannot well be overdone with water. Lawns must be regularly mown, and the edgings of the walks clipped, so as to preserve neatness and order.

Greenhouse soft-wooded plants, such as *Cinerarias* and *Primulas*, which were raised early, should be shifted on, and placed in a frame under a north wall. *Chrysanthemums* should be potted on, the plants stopped-back, and the shoots tied down. Such stopping as may be required to secure a furnished habit should be now seen to, as they do not flower so satisfactorily if stopped after this time. The late-flowering varieties and the Pompons may be stopped a few weeks later, if necessary. Plunge the pots out-doors where they may be fully exposed, watering freely at the root, and damping over the foliage nightly. *Salvia splendens* must receive a free system of culture when grown in pots, and placed outside in a sheltered position ; a portion of the stock should be planted out of pots, when they will make rapid progress, and require to be potted up in autumn. Hybrid *Solanums* make the best plants when turned out of their pots during the summer months, and are so far hardy that they resist from 8° to 10° of frost with impunity. *Celosias*, *Balsams*, and *Coxcombs* that are grown for conservatory decoration must receive liberal treatment, with abundance of ventilation, to insure a stocky habit.

The early-blooming *Heaths* will have made the greater portion of their growth, and the soft-wooded varieties will benefit by full exposure to sun out-of-doors, standing them on a bed of ashes or other material impervious to worms ; such as are grown under glass must have free ventilation both night and day. *Camellias* that were started early will now be in an advanced state, and setting their bloom-buds, so that a freer system of ventilation must be given, avoiding any sudden check, which is liable to induce second growth. The same remarks are applicable to the early-forced *Azaleas*, such as are starting into growth being kept in a brisk growing moist temperature. *Lachenalias* and *Tuberous Tropæolums* that have perfected their growth should have water gradually withheld until they are perfectly dried off.

Stove plants such as *Hedychiums*, *Allamandas*, *Clerodendrons*, &c., that are established in their pots will be improved by applications of weak liquid manure at each watering. *Begonias,* which are grown for the beauty of their flowers, thrive best in an unshaded, freely-ventilated structure. As many of the *Palms* are so largely grown in small pots for decorative purposes, they will be greatly improved by feeding with manure-water. With the increased amount of root and atmospheric moisture now necessary to perfect the growth of East Indian orchids, air must be more freely given, as a stagnant state of the atmosphere, with such a heat, is mostly productive of blotching and decay. The plants of *Phajus grandifolius*, which forms one of the grandest specimens for conservatory embellishment, will now require potting as they cease blooming, and growing in a brisk heat ; equal parts of turfy loam, peat, and dried cow-dung, with charcoal and sand, will grow them luxuriantly.—G. WESTLAND, *Witley Court.*

## FRUITS.

*Peaches and Nectarines :* Keep the trees well syringed up to the time the fruit is ripening ; then expose the crop as much as possible to the sun, and admit plenty of air to give colour and flavour. Later houses may have the day temperature increased. Thin and tie-in the shoots in the latest house, and treat them as before advised. Use plenty of moisture.

*Plums :* These will require plenty of air and moisture till such time as the fruit begins to ripen, when syringing must cease, but continue to water freely at the root, more especially if they are growing in pots.

*Cherries* in pots should be plunged outside as soon as the crop is gathered, or taken out of the pots and planted; these will still require attention, as well as those intended for forcing next season. Keep them well syringed, and watered in dry weather, and clear them from black-fly.

*Pines:* Attend to last month's directions respecting airing, temperature, &c. Tie up the fruit to keep them upright when they are swelling off; maintain a moist atmosphere, and give a liberal supply of water at the root. Shift the succession plants, as they may require pot-room, and shade for a few days after potting. Syringe daily in the afternoon, and do not let any of the plants want for water at the root.

*Vinery: Muscat* grapes should be assisted with a little fire-heat except in *hot* weather, so that the night temperature may range from 65° to 70°, and with air and moisture it may rise to 90° in the day-time. Late vineries should also have a little fire-heat in chilly weather. Keep up the requisite moisture when the fruit is set; then go on with the thinning of the fruit, regulating the shoots, tying, &c. If mildew makes its appearance, dust with dry sulphur. Keep the early houses well aired where the fruit is perfectly ripe. Plunge pot vines or otherwise shade the pots from the sun, give them every assistance by mulching, and manure-water two or three times a week, but be careful not to give it *too strong* or it may kill the young feeders, and spoil the crop as regards colour.

*Melons:* We may yet experience some chilly weather, therefore do not let the heat decline in the beds, but attend well to the linings by turning and adding fresh stable-litter; this will guard them from injury should sudden changes in the weather occur; give the plants a good soaking of water, except where the fruit is approaching maturity; air freely, syringe and close the frames *early* in the afternoon; avoid shading if possible.

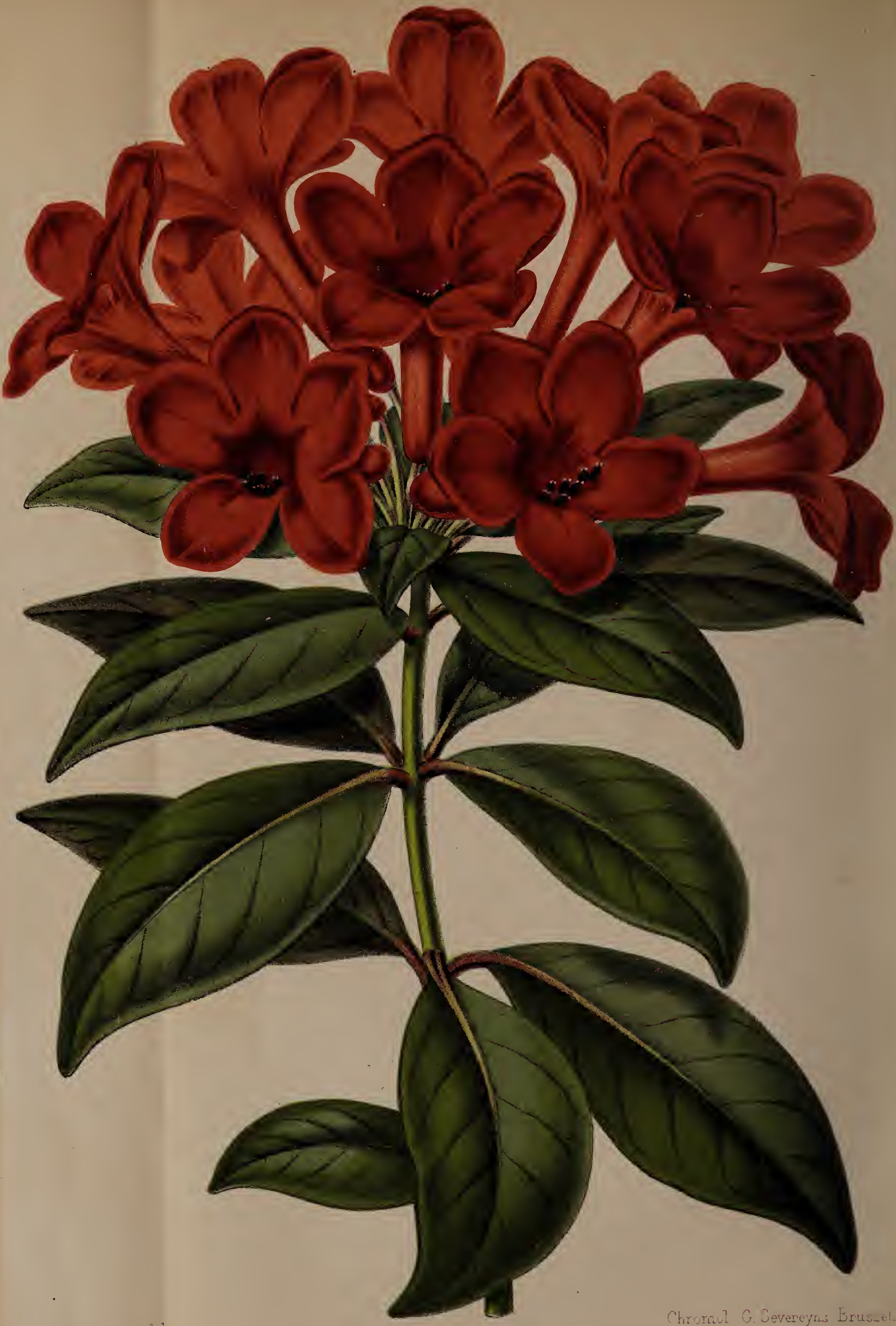
*Hardy Fruit:* The present is a busy month in this department. Every attention should now be given to trained fruit-trees; wall-trees especially should be gone over in time, and the shoots thinned and stopped, to admit air and light among the young fruit. *Pears*, *Plums*, and *Cherries* should be subjected to this treatment. *Peaches* and *Nectarines* should be gone over often, and the thinning of the fruit and shoots carried on in moderation, bearing in mind to retain sufficient foliage to shade the larger branches from the scorching sun; keep the trees free from fly by the means before stated, and dust with sulphur if mildew appears. Use the garden-engine to wash the trees in the afternoon of fine days. Give the final thinning to *Apricots;* thin and nail-in the shoots, and a good soaking of water at the root would be beneficial if the weather be dry. Pinch out the points of the young shoots of *Currants* to check green-fly, and look out for caterpillars—also on *Gooseberries;* hand-picking is the best means of clearing the trees of this pest. Finish mulching *Strawberries* with litter or short grass at once, and water in dry weather; plant out the forced plants, as these will produce heavy crops of fruit next year. *Orchard-houses* should have plenty of air and water; in fact, neither can well be over-done at this time of the year, more especially if the trees are in pots.—J. Powell, *Frogmore.*

## VEGETABLES.

Look through all the spring crops, to ascertain whether they are likely to afford such a supply as will suffice or not. It is to be feared in many instances some of the tenderer kinds of vegetables may have missed altogether, either through frosts, which, owing to their prevalence, have materially injured many things, or by insect pests, which, owing to the very slow growth of the plants, have this season had more than ordinary power over them. In the case of any failures of such kinds as are wanted other sowings should be made immediately. If the weather proves more favourable during the two last weeks of May, some progress may possibly be made in thinning-out superfluous seedlings from all crops. Indeed, this is an operation which should be done as early as possible, and hence will require full attention during the current month. All such crops as *Onions*, *Carrots* of the intermediate and long kinds, *Parsnips*, &c., should be thinned out freely; not only is the produce finer, but the aggregate bulk is increased, by a free system of culture. *Onions* should not be less than six inches apart, in all cases where fine examples are intended to be grown. Those for pickling, and such other quantity as are required for use whole and of moderate size, require no thinning at all. Immediately following the thinning process, give the ground a thorough good and deep hoeing between the crops, which not only tends to destroy weeds, but loosens the soil after the necessary treading upon it, and aids the young crops to grow freely.

*Asparagus-beds* or plantations would be much benefited by a moderate dressing with coarse or other salt at this season; scatter it broad-cast across the beds. Though it will be possible to cut Asparagus for use later this season than ordinarily, owing to continued cold weather, and the moderate supply previously produced, yet is it desirable to cease cutting as early as possible, both in view of taxing the roots as little as possible, and also to give the young shoots that are permitted to grow away freely more time to perfect and ripen their growth.

Plants of spring-sown *Cauliflowers* that have attained to a moderately good size in the seed or nursery beds, should be planted out at the earliest time possible in a good rich permanent bed previously prepared for them. All other seedling plants of the *Broccoli*, *Borecole,* or *Cabbage* tribes must have direct attention in the matter of thinning them out, and transplanting such as are drawn—being generally the strongest—on to nicely sheltered nursery beds. This operation should always be attended to, when practicable, upon a dull showery day, or during the latter part of the day, when a hot arid period has set in. Make other sowings of such as these and kindred subjects, according to the home wants, and the success or failure that has attended the first sowings. Place the requisite sticks to *Runner Beans*, by anticipation rather than following an apparent need of required support. Immediately the last sowings of *Peas*, *Broad Beans, Dwarf French Beans*, &c., show through the ground, make successional sowings with any remaining stock of such kinds as were previouly sown, or other late kinds. Make a good permanent sowing of *Parsley* early in the month, as the crops produced from such a sowing will furnish a supply throughout winter and early spring. Sow, also, a successional batch of such herbs as *Sweet Basil*, *Purslane*, &c., to produce a supply of green young leaves for late autumnal use. *Turnips* should be sown during any showery weather at the latter end of the month. Many subjects will require to be planted out definitively, comprising such things as the early-sown *Sweet Basil, Chilis* or *Capsicums, Tomatos*, *Vegetable Marrows*, and the customary *Ridge Cucumbers*, *Gherkins,* &c. The latter may be planted out in a variety of ways. Either make a bed of fermenting materials in the ordinary way, using stable-yard manure, old leaves, or any kind of litter, so as to cause a moderate heat; upon this a foot or two of soil should be placed, and into this plant out the plants previously prepared in pots, or sow the seeds therein forthwith. One other efficient and easy method is to dig a trench in the sheltered part of the garden, to place short grass-mowings or litter of the kind above named, &c., therein; place over this rich soil, plant out the plants, and cover in both cases with hand-lights.—WILLIAM EARLEY, *Valentines.*



L. Macfarlane del Chromol. G. Severeyns Brussel

Rhododendron Duchess of Edinburgh.

# RHODODENDRON DUCHESS OF EDINBURGH.

WITH AN ILLUSTRATION.

THE beautiful varieties of the *jasminiflorum* type of *Rhododendron* rank amongst the choicest of conservatory ornaments, being distinct in character, moderate in size, varied in colour, and withal possessing a fragrance which is no small recommendation. The variation in colour is now extended, for to the white-flowered type, and Princess Alexandra, and the pink-flowered Princess Royal and Princess Helena, we have to add the striking novelty now represented, in which the blossoms are of a glowing orange-scarlet. This fine plant was raised by Messrs. Veitch and Sons, of Chelsea, and was shown at South Kensington early in March of the present year, when it was awarded a First-class Certificate.

The plant, which was raised between *Princess Royal* and *Lobbii*, is of the neat habit peculiar to this race. The leaves are elliptic, glossy, and coriaceous, about two inches long. The flowers grow in terminal umbels of from nine to twelve together, and have a comparatively slender curved tube two inches long, with an expanded limb of nearly equal obtuse segments, of a rich orange-scarlet colour. It is indeed a gem of the first water, and thrives under the treatment usually given to *R. jasminiflorum*, that of a warm greenhouse.—T. MOORE.

# CHOICE CONSERVATORY CLIMBERS.

THE interiors of our stoves, greenhouses, and conservatories are necessarily of such a cramped and artificial character, of a style so much at variance with everything we are apt to associate with the highest type of vegetable beauty, that it becomes very desirable to drape them with vegetation, and to beautify them as much as possible without injury to the contents of the house, by placing the best climbers on such pillars, supports, or positions in the house as may be most suitable to them. Nothing can tend more to the embellishment of the indoor department than the introduction of a good selection of well-grown climbers, kept clean, and in graceful training.

Some climbing plants, like the LAPAGERIA, are so well known and appreciated as scarcely to require mention. My object is to add the names of a few subjects of first-rate merit not so generally cultivated. This remark, perhaps, hardly applies to PLUMBAGO CAPENSIS, which is grown in nearly every garden. But how? In many old stoves it may be seen treated as a pot plant, with very trifling success, compared with what may be attained by planting it out in the conservatory. It is unquestionably the finest autumnal plant we have for a pillar in a conservatory or any large cool house, and the masses of lovely light blue it produces when in that position are unequalled. With this Plumbago against a tall pillar there can be no mistake! The large class of gardeners who have to specially provide for an autumnal effect would do well to plant it, and after taking it up the tallest pillars, to train it along the roof in wreath-fashion, if possible. In addition to the highest beauty and abundance of prolonged bloom, it has the great merit of being a clean plant, not a nuisance to keep clear of green-fly, like the *Mandevilla*, or of scale and mealy-bug, like some of the *Tacsonias,* and others. The treatment, too, is quite simple: cut in close in winter, and allow it to take its own way in the growing season, and thus will be secured a mass of pleasant green through the summer, and in autumn every shoot will bend down with its lovely crest of blue. It may be planted anywhere in the floor of a conservatory, or in a bed of any kind, and should be cut in with a free hand in winter.

CANTUA DEPENDENS is magnificent when planted against the back wall of a conservatory, or in any suitable position in the conservatory, and allowed to make a free full growth there. It has a fine effect trained up a pillar. It should be planted in a good free loam, but it is not particular as to soil. In South Devon it flowers splendidly on the open walls.

From the great fragrance and value in winter of the flowers of JASMINUM GRANDIFLORUM—the Catalonian Jasmine—this plant is well worth planting out in an intermediate house or warm greenhouse, there to afford a profusion of its flowers—of so much importance for bouquet-making or indoor decoration, or in fact, for any of the purposes of the decorating horticulturist.

RHYNCHOSPERMUM JASMINOIDES, so often shown well in pots, is a fine thing to plant out in the warm greenhouse or intermediate house. It should have a nice position near the glass, and requires very little more care as to choice of position and attention, than *Cobea scandens* or *Passiflora cœrulea*, with which some embellish their conservatories. One can fancy nothing more beautiful than wreaths of this Rhynchospermum in a rather low position near the glass towards the front of a house, of a temperature suited to its wants. It is a sweet and beautiful thing grown in any way.

Wherever there are conservatory walls or large wall-spaces in conservatories, a place should be found for the DATURA, or BRUGMANSIA SUAVEOLENS, a noble plant when planted in such a position, and whose large white pendent flowers, popularly called Angels' Trumpets, would diffuse their sweetness through the house, even though it were as large as the conservatory at Chatsworth. A fine flower like this, which opens and breathes fragrance when animated nature is drowsy or asleep, is certain to command admiration.—T. M.

## CYCLAMEN REPANDUM.

I MADE a very useful discovery during a late visit to some very interesting "trial grounds," belonging to Messrs. Barr and Sugden. It is, that *Cyclamen repandum* is a perfect gem of a plant for planting upon conspicuously bare places, under overhanging trees of the evergreen type. Independently of its flowers, which are pushed up much in the way of our Persian species, *Cyclamen persicum,* and are of a bright magenta-colour, this very distinct species is a foliage-plant of the first water. Not only are the leaves beautiful, as all Cyclamen-leaves are, in regard to their characteristic markings, but those of

*C. repandum* are of comparatively large size, being when well grown, larger than the largest circle one can draw upon the human hand. Of course it will be understood I write of it as seen under good cultivation. I quite anticipate the inquiry—Is it really hardy? Mr. Barr assured me, it could be maintained in such a position—maintained of course by a resort to the customary simple means of laying a few inches of cocoa-nut refuse over the corms during the frosts of winter. All are aware that it is a native of Greece, and though Greece is the most southern part of Europe, the thermometer is known to fall below 40°. That we can maintain beneath such trees as are here referred to, and with the aid of a mulching of some such open materials as I have named, such a degree of ground-heat, there can be no doubt; and once this is admitted, the fact becomes patent to all, that *Cyclamen repandum* may defy our climate therein.

Indeed, upon consideration, I do not see why *C. repandum* should not be called hardy, along with such other South-European species as *C. neapolitanum, C. vernum*, *C. latifolium*, and *C. ibericum*, even though we admit that its natural home, Greece, extends a degree further south than South Europe does generally. Should any one contemplate trying a small patch or bed of this large-leaved species upon any bare patch of herbless ground, or otherwise, under any evergreen trees, it were perhaps hardly needful to dwell upon the necessary preparation of a limited space for their reception. It would be requisite to excavate a border purposely for them; a layer of cocoa-nut refuse or decomposed leaves should be placed at the bottom, and upon this should be added a good rich compost, formed of fibrous loam, peat, cow-dung, soot, and well-rotted leaf-mould. The cow-dung, too, should be thoroughly decomposed, the soot moderate in quantity only, and the leaf-mould in abundance. Press the compost firmly before planting, and water freely during dry summer weather.—William Early, *Valentines.*

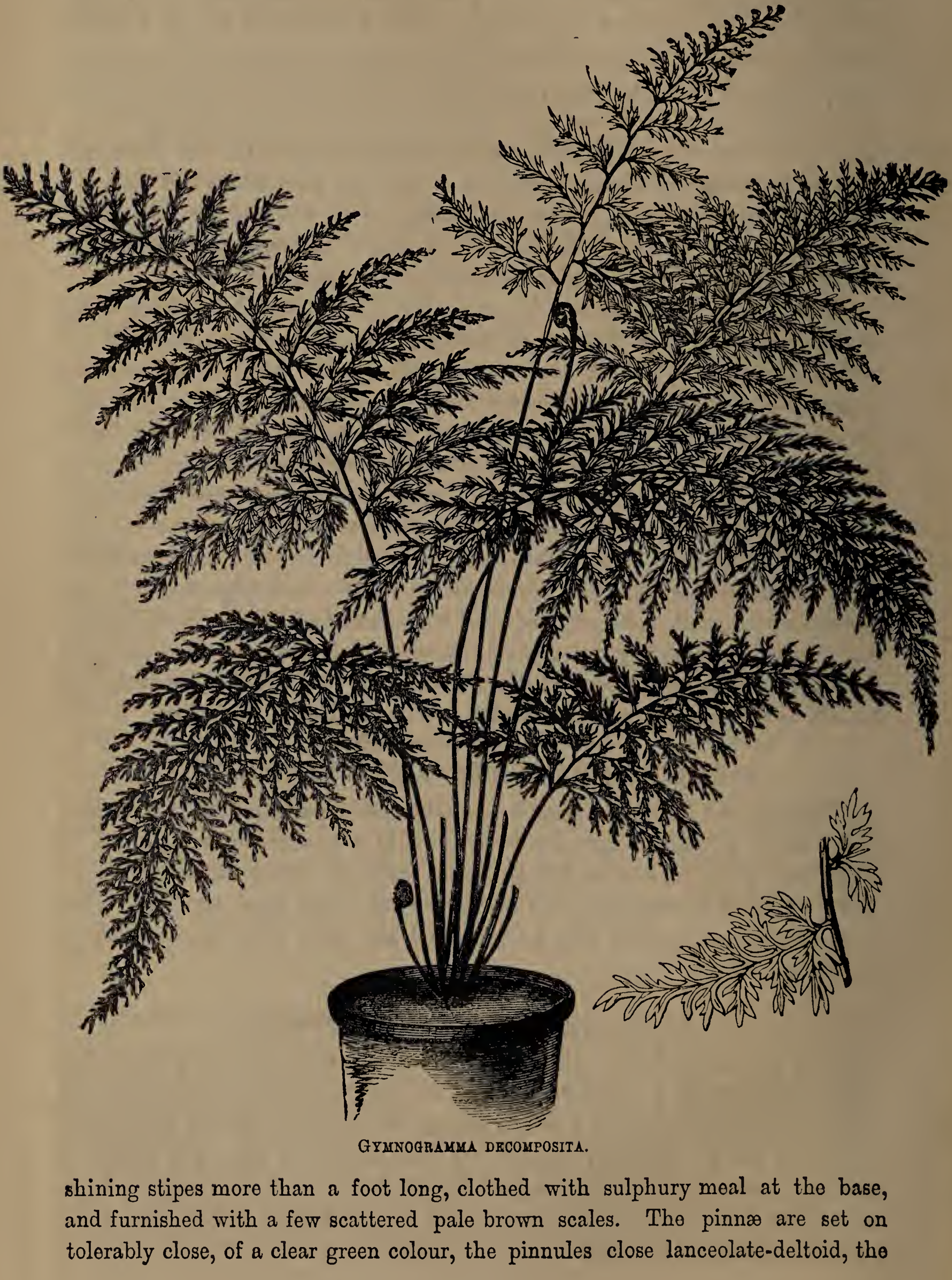
## CHELONE BARBATA ANTWERPENSIS.

THIS fine old herbaceous plant is now seldom or never seen, but it is one that would give satisfaction everywhere. It is a summer-flowering plant of long duration, and has fine handsome spikes of scarlet flowers, which are produced in abundance in a good heavy soil. The plant requires dividing and replanting every other year in fresh soil, like most other hardy plants.—H. Knight, *Floors.*

## GYMNOGRAMMA DECOMPOSITA.

AS a garden plant, this new golden fern will take the position of a companion to the silvery *G. pulchella*, the size, fine cutting, and triangular outline of the fronds, producing a certain amount of similarity, though botanically the two are perfectly distinct. It was introduced from the Andes of South America, by John Gair, Esq., of Falkirk, by whom it was sent to Kew, and from thence it has been distributed. We are indebted to Mr. Bull for the use of the annexed illustration.

The fronds of this elegant fern are nearly deltoid in outline, membranous in texture, and quadripinnatifid in division, supported on dark chestnut-brown



GYMNOGRAMMA DECOMPOSITA.

shining stipes more than a foot long, clothed with sulphury meal at the base, and furnished with a few scattered pale brown scales. The pinnæ are set on tolerably close, of a clear green colour, the pinnules close lanceolate-deltoid, the tertiary segments palmatifidly cut down into linear-acute segments, and bearing the sulphur-yellow sori through the whole length of the vein. It is a fine stove species, the large triangular fronds having a peculiarly elegant appearance from their fine cutting, while the minute finger-like divisions into which the lobes are split up give it a distinctive character.—T. MOORE.

## ROUGH PLATE GLASS.

THE use of this material for horticultural purposes has not become so common as it bade fair to do twenty years ago. My experience of it then (though the work was done badly, and in such a manner as to turn anyone against the use of rough plate glass,) was such as to lead me to believe, as I still do, that it could be made very serviceable and economical for many garden purposes.

Though I have specially advocated its use for late vineries, experience has this season taught me, that rough plate glass answers well for early forcing. During cold nights much is saved in the way of fuel; and in changeable weather the foliage of the vines is not liable to be scorched. Moreover, hail-storms, such as we experienced two months ago, do not crack the glass.

Having during the last eight or nine years been successful in keeping several kinds of Grapes till May and June in as good condition as that in which they were in September with ordinary glass structures, I now find that I can keep the fruit more easily under rough plate glass. We have lost none from damping-off, and the fruit has been less liable to shrivel before being cut and hung up with pieces of wood attached, and placed in bottles of water.

Rough plate glass seems very unsuitable for houses or pits which are sunk in the ground; the damp seems to be drawn up, and drip is ready to form. For camellia-houses, fern-houses, and houses to hold plants when in flower only, rough plate glass seems to be an advantage; and for cucumber-pits and frames for summer work, I would use it gladly. I have known Melons grown under lights of which one-half has been of each kind of glass, and the difference of the produce was imperceptible, but shading in the case of rough plate glass is unnecessary at any time.—M. TEMPLE.

## HARDY FRUIT CROPS AT BURGHLEY AND IN THE MIDLAND COUNTIES.

THE present season, irrespective of the sudden fluctuations of temperature and catching frosts, promises to be a very good one for the fruit crops. At Burghley, I found bush fruits, as Gooseberries, Currants, and Raspberries, especially good, as compared with what one might have supposed, after reading the meteorological reports of the spring and early summer months. Of the last named-fruit, Mr. Gilbert has some fine plantations, all trained on the bow or arching system, and these promise an abundant supply of fruit. The *Prince of Wales Raspberry* is largely grown here, and is found a most prolific and richly-flavoured variety, well worth adding to every collection. Strawberries are here grown in quantity. Planted on well-manured ground, that has been trenched to a depth of three feet, these are in splendid condition and promise full crops. The old *Grove-End Scarlet* is grown here for preserving, and Mr. Gilbert speaks of it as the very best for the purpose, being of a fine sprightly flavour, and of an excellent colour throughout. At present this appears very limited in its distribution, but deserves the attention of all Strawberry-growers. Cherries, especially Morellos, are a full crop, and I noticed a very nice sprinkling of fruit on the *Burghley Park* variety, which was described and figured in a former volume of the Florist.

I notice that insect pests are especially abundant in many gardens in the Midland Counties, doing serious damage to both Plums and Cherries on walls, notwithstanding that in many cases they have been dusted with tobacco-powder, and repeatedly washed with the garden engine. Pears and the finer Apples on walls seem to be abundant and of excellent quality. Apricots are looking remarkably well, fruit being plentiful, while in one or two gardens Figs are bearing well, the fruit being already nearly full-sized, so that there is plenty of time for it to be ripened by the hot suns of July and August.—F. W. B.

## FRUIT CROPS IN GLOUCESTERSHIRE.

THE spring of 1874 will long be remembered for its severity. Our fruit crops have suffered, but not to the same extent as those of many of our neighbours. This circumstance may be owing partly, if not exclusively, to the high situation of our garden, where the atmosphere is always drier than in low localities. There may be the same amount of cold at a higher elevation, but it is not so destructive as where the air is saturated with moisture. The following is a slight sketch of our condition during the past spring—a statement of results, after one of the most promising seasons I can remember, even although the summer of 1873 was cold and wet, by no means calculated to ripen the wood; indeed, we could hardly have anticipated such a profusion of blossom as we had. On to the 11th of March we had nothing to complain of in the way of frost, but on the 12th and 13th there were respectively 9° and 12°, accompanied by a bleak, drying north wind; it so happened that several of our peach-trees were then in flower, and strange to say, although they were fully exposed, they escaped without damage. Throughout the early part of April the weather was all that could be desired, favouring the idea that there would be an abundance of fruit. The crucial trial was yet to come, for on the 17th the wind changed from the south and south-west to the north and north-east, blowing bitterly cold and dry, robbing the tender foliage of its moisture, while the roots were yielding but a scanty supply. No apparent injury was done, nor have I found the damage of any consequence. According to the reading of Negretti and Zambra's maximum and minimum thermometers, the 27th was a day of extremes; the heat rose to 85° in the shade—the warmest day in April during the past 20 years—and sank the preceding night to 42°.

The month of May brought us no relief; the wind continued to blow keenly from the north and north-east, with bright sunshine and frosty mornings. On two occasions only during the month did the thermometer register more than 59°. On the 9th the frost was, for the season, unusually severe throughout the country. In many cases, I am told there were 10°, 12°, or 13°, which made sad havoc among fruit crops of every description, to such an extent, in fact, that the apple crop on the banks of the river Severn has been completely destroyed; not there alone, but in all low-lying districts. This is the report which has reached me, and may to some extent be exaggerated, yet, in the main, I fear it is too true. With ourselves, in the low situations of our park, the frost has considerably nipped the foliage of the common Oak, Tulip-tree, *Juglans nigra*, and *mandschurica;* the latter we can hardly select as a test tree, as it suffers almost yearly, less or more, unless planted on high ground.

Here, bush fruit is abundant; also Apples and Cherries; but owing to the continued drought, a large portion of the crop is dropping off. Strawberries are plentiful, but unless we have rain at once, the fruit will be small, and the succession short. A substitute may be found by the use of the water-pot—a process involving great labour, and by no means quite satisfactory in its results. Peaches have set so thickly as to require thinning. Our Apricots are under glass, hence beyond casualties. Plums are deficient, little more than a third part of a crop; and the same may be said of Pears. We are suffering severely from drought; we have only had two days' rain since the beginning of April—about the 7th of the month.—ALEXANDER CRAMB, *Tortworth.*

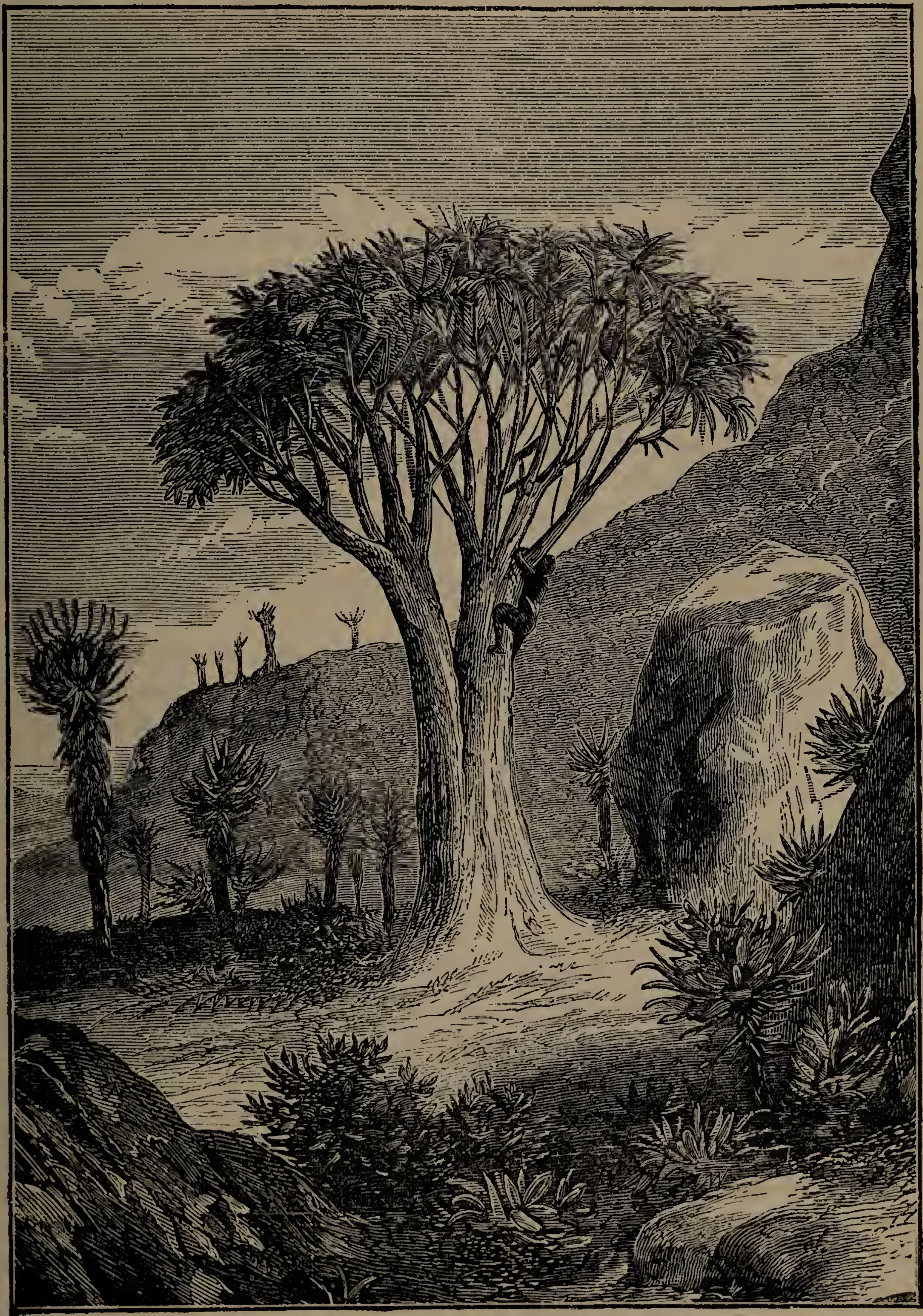
## SELAGINELLA KRAUSSIANA.

IN one of the recent numbers of the FLORIST [p. 137], I observe a notice of this plant as being hardy in some situations, and consider this a most important fact. It is generally known in gardens as *S. denticulata*, a name it is in no way entitled to; and more rarely as *S. hortensis*, but *S. Kraussiana* ought to be adopted as the more correct specific title. I here especially allude to this Club Moss with a view of advocating its use as a carpet-plant for flowerbeds during the summer months, a purpose for which it is largely used in Paris, more especially in the attractive little Parc Monceaux. If planted in any rich, sandy compost, and sheltered from rough winds, it would doubtless succeed well in this country, and prove a most valuable addition to the flower garden. It requires a copious supply of water, and in France, where it forms dense, turf-like carpets, it is sprinkled every morning; the system of watering with movable hose, there generally adopted, rendering this a very expeditious and simple operation. As a carpet or surfacing plant for a cool conservatory, or the beds of a winter garden, this has, I believe, no equal, and it deserves to become popularly used for this purpose, even if it fails to succeed outside. One of the beautiful ferneries at Manley Hall used to be carpeted with this verdant, turf-like Lycopod, and during the early spring months a charmingly natural effect was obtained by plunging pots containing Hyacinths, Crocuses, and Narcissi near the margins of the walks. Glimpses of these were obtained from different points of sight, and as seen beneath the gracefully arching fern-fronds they told well, and were much admired by the few favoured visitors who were allowed to see them. This plant is to the floor of a conservatory or fernery what *Ficus stipulata* (*F. repens* of gardens) is to the rockwork and walls; and with these two plants judiciously used, any bare place in plant-houses may be made fresh and interesting in a comparatively short time and at little expense.—F. W. BURBIDGE.

## ALOE BAINESII.

FROM a very interesting account of the Tree Aloes of South Africa, recently published by Professor Dyer, in the *Gardeners' Chronicle*, 1874, 567 (whence, also, our figure, reduced from a much larger illustration, is derived), it appears that at least four species occur on that continent, namely, *Aloe dichotoma;* an undetermined species from Damaraland; the *Aloe Bainesii*, represented in our figure; and the Caffrarian *Aloe Barberæ.* These attain from 30 ft. to 60 ft. in height, and all have much the habit and aspect of that here represented.

*Aloe Bainesii* is now growing at Kew, and is a most remarkable plant. It has tufts of glaucous-green distantly spiny leaves, a foot long, and two inches broad, crowded at the ends of its branches, and was discovered by Mr. Baines, after whom it is named, in the northern part of Natal. From Mr. Baines's letter to Dr. Hooker, quoted in the article referred to, we learn that this arborescent *Aloe* was growing on the slope of a rugged hill, overlooking the sources of the Inada or Inanda rivulet, a tributary of the Tugela river, and perhaps nineteen or twenty miles north-east of Greytown. Early in June, 1873, while proceeding to examine a hill near the Tugela, reported to be auriferous, Mr. Baines first met with these aborescent Aloes, and remarked their similarity to the great Tree Aloe of Damaraland, and also noticed that they were different. The men of his party being heavily laden, and the way exceedingly rough, he did not detain them, resolving to make a sketch on his return, but when he again passed the locality, he had no opportunity of doing so; he believes, however, that he saw a flower of a bright orange or scarlet colour on one of the trees. On July 2, when returning from the Inyemba hill, where they had been prospecting with just sufficient success to ascertain that gold was actually there, the rugged slope was again crossed, and this being the only place where the Aloe had been observed, Mr. Baines let the men go on, and halted to make a sketch, sending a Kaffir up the tree to gather a branch, and to search for flowers. The tree sketched was estimated at 20 ft. high, and the spread of its crown about 15 ft. The trunk seemed about 2 ft. thick, and at 5 ft. or 6 ft. from the ground divided into half-a-dozen branches, and these again were subdivided into many more. The bark was white and smooth, as in the Tree Aloe of Damaraland, but the leaves were long and slender, with small hooked thorns along the edges, and curved downwards, and the flower, he believes, was scarlet and orange, though



Aloe Bainesii: on rocky hills in Eastern South Africa.

none could, on this occasion, be found. In these points it differs from the Damara species, the leaves of which curl upward, while the flowers are of a bright yellow. Mr. Baines adds, that since his arrival in Durban, he has heard that Aloes similar, or nearly so, have been found in the Noodsberg.

Another of the South-African species, *Aloe Barbaræ*, is also growing in the fine collection of succulents in the Royal Garden at Kew.—T. M.

## RENOVATING OLD STRAWBERRY-BEDS.

AS I was allowed space for three articles in the FLORIST recently, I had determined on leaving its future pages to contributors more conversant with the higher walks of gardening; but an interesting paper on the culture of this useful fruit, at p. 130, impels me to disclose a course of cultivation by which heavy crops may be taken from the same plants for many successive years.

Three seasons ago, I purposed forming new beds, but the summer had been so dry that my plants were weak and insufficient in number. I desired my man to trim the old plants and remove all runners (this was in the September month), and hired a boy to collect from the cow-meadow barrows of the fresh droppings. This substance was applied very unsparingly, filling up even all the channels between the rows, and making all the bed a perfect level. The winter rains dissolved and washed the whole into the ground. The result was such a blooming as I had never before seen, and the promise given by its beauty was realised by a wonderful produce.

Last September I repeated the process, and now, while Strawberries are very scarce in the neighbouring gardens, mine are destroying each other by pressure and crowding, although we gather daily for dessert and presents, and every third day for the kitchen. It is well known that old strawberry-plants are sustained by their surface-roots; and these are profusely produced and fed by this cooling and harmless stimulant, and hence my success and the saving of trouble. The plants are now a foot high, in full health, and with dark and gross foliage. I shall take another crop by the same process.—G. D.

## LATE BROCCOLI.

CATTELL'S Eclipse Broccoli is worthy of all Mr. Knight says of it, as being the best late sort to grow, to meet the first crop of spring cauliflowers. In fact, I think it is now the only sort that can be procured to meet the above desideratum. All so-called late sorts that were sent out to the public previous to this one of Mr. Cattell's, have lost all their characteristics for lateness, and appear to have merged into those sorts adapted for March and April cutting. One sort in particular was, in my estimation, a good and desirable sort; that was Macfarlane's, or, as it was sometimes called, Leslie's Late White, a sort I hear nothing of now, because, I presume, its distinct character is gone.

I am sorry to say that I find Cattell's Eclipse is likely to follow in the same track, for I have grown it consecutively since 1866, and I find its tendency is to come earlier every season, as the major part of the crop was ready for use when other earlier sorts were in, and the proportion of late-flowering plants proved to be very small indeed, compared with that of a year or two after it was sent out. If, therefore, care be not taken, by those who grow the seed for the public, to weed out the earlier produce, and save seed only from the very latest heads, it will follow after others, and we shall lose it altogether, which all who grow it know we can ill afford to do.

Of course, the seasons have a great influence on the lateness of Broccoli, but as it is scarcely possible to grow them too late, every effort should be made to retain that qualification in a vegetable that is so serviceable as a good late Broccoli. I generally make about three sowings of Cattell's Eclipse, at intervals of about three weeks, and plant each on different aspects. The latest I cut this season was from a northern aspect, on a border under a wall, on Saturday, June 6; and from hand-lights cauliflowers were cut the last week in May.—Thomas Record, *Vinter's Park, Maidstone.*

## WHO IS RIGHT?

I HAVE often found a difficulty in the difference of opinion expressed by competent judges as to the merits of certain plants and flowers, and in no case is this more remarkable than among Zonal Pelargoniums. As a practical cultivator, I can make due allowances for circumstances, soil, and climate, but these put together hardly amount to a solution of the difficulty. I think the anomalies must arise from the want of a clearly defined and acknowledged standard to judge by. In the case of Pelargoniums, for example, one grower or class of growers will be influenced principally by the flower, another by the truss, a third will be swayed by the habit of the plant, and a fourth will weigh all these points in combination, giving to each his estimate of their respective value, and pronouncing accordingly. Certainly, when dealing with a plant which is used for such various purposes, it would seem to help to an accurate estimate of value if the plant were looked at from one or other of two points of view,—(1) as a florist's flower, in which shape, size, and substance are the chief requisites; and (2) as a decorative or bedding plant, in which colour, habit of growth, freedom and duration of flowering, should be placed in the ascendant. This, I am aware, has been done in the Report of the Royal Horticultural Society, so far as to classify them as "bedding plants" and "pot-plants," but the " doctors " still differ widely, which I will proceed to show, by placing side by side the opinions of the Floral Committee of the Royal Horticultural Society of London, and those of two or three of the largest growers of this plant in the vicinity of London :—

### Golden Tricolors.

Allan-à-Dale: Discarded as a bedding sort, *R.H.S.;* recommended as superior for bedding, *E. G. Henderson & Son.*

Hong Kong: Discarded as a bedding sort, *R.H.S.;* recommended as superior for bedding, *E. G. Henderson & Son.*

Miss Batters: Discarded as a bedding sort, *R.H.S.;* recommended as a bedding sort, *H. Cannell.*

Mrs. Dunnett: Discarded as a bedding sort, *R.H.S.;* recommended as superior for bedding, *E. G. Henderson & Son.*

Saragossa: Discarded as a bedding sort, *R.H.S.;* recommended as a bedding sort, *E. G. Henderson & Son.*

### Silver Tricolors.

Caroline Longfield: Discarded as a bedding sort, *R.H.S.;* proved fine for bedding, *E. G. Henderson & Son.*

Clarinda: Discarded as a bedding sort, *R.H.S.;* proved fine for bedding, *E. G. Henderson & Son.*

Mrs. Masters: Discarded as a bedding sort, *R.H.S.;* proved fine for bedding, *E. G. Henderson & Son.*

Mysterious Night: Discarded as a bedding sort, *R.H.S.;* proved fine for bedding, First-class Certificate, *E. G. Henderson & Son.*

Miss Farren: Discarded as a bedding sort, *R.H.S.;* a fine bedding sort, of first-rate quality, *W. Paul.*

### Silver-Margined.

Alma: Discarded, *R.H.S.;* recommended for bedding, *John Fraser.*

Princess Alexandra: Discarded, *R.H.S.;* one of the best for any purpose, *H. Cannell;* the best white-leaved bedding variety, *E. G. Henderson & Son;* an excellent bedder, *John Fraser.*

Mountain of Snow: Discarded, *R.H.S.;* recommended for bedding, *John Fraser.*

Variegated Stella: Discarded, *R.H.S.;* recommended for bedding, *John Fraser.*

### Bronze Zonals.

Beauty of Wolverstone: Discarded, *R.H.S.;* fine bedder, *Downie & Co.*

Criterion: Discarded, *R.H.S.;* very good, *Downie & Co.*

Kentish Hero: Discarded, *R.H.S.;* the finest bedder, *Downie & Co.*

Midas: Discarded, *R.H.S.;* probably the best of all the Bronze Zonals, *W. Paul.*

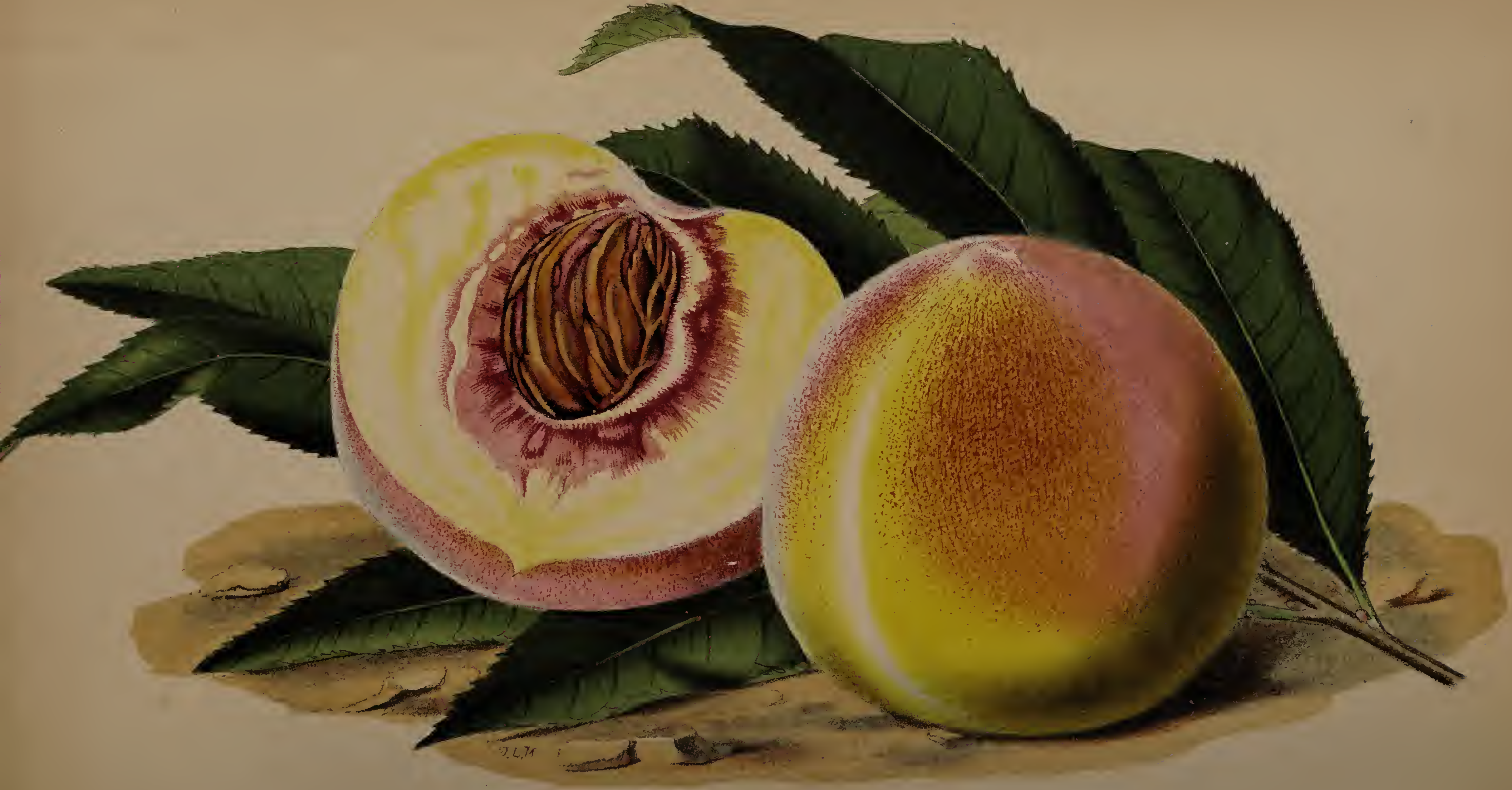
W. R. Morris: Discarded, *R.H.S.;* extra fine, *E. G. Henderson & Son.*

Plutus: Discarded, *R.H.S.;* a first-class variety in every way, *H. Cannell.*

This brings me to the end of Zonal Pelargoniums judged for the beauty of their leaves. In my next paper I will deal with the varieties judged for the beauty of their flowers.—W. P.

## GOOSEBERRIES FOR GARDEN FENCES.

WHY not? and also for hedges between arable fields on farms? There can be no question that a thorn hedge forms a good fence, but it is no more than a fence; it needs good land and free exposure to light and air to grow it, and a great deal of labour to keep it in order, but it yields no profit. Perhaps nothing could be better for external fences or for boundary lines between meadows, where a strong fence is needed to prevent the passage of stock; but in such positions as those indicated above, an impenetrable barrier is of less moment. A certain amount of shelter, and a clear sharp line of division are all that is necessary, and these may readily be found in Gooseberry plants of various sorts. In fact, many varieties, such as the Ironmonger, Warrington, &c., with their long sharp spines, would make a fence almost as impenetrable as Quickset itself; and almost any sort of Gooseberry has spines enough to constitute it a good hedge plant. Of course a great deal depends upon the modes of planting and training. It would not, however, be difficult by a little manipulation to make a fence of Gooseberry-bushes quite as impenetrable as most of those formed of White-thorn; but with even ordinary attention, they would form a fence sufficient for the positions thus indicated.



BARRINGTON PEACH.

Supposing them only to be used as dividing lines between gardens, what an immense gain to cottagers and small holders would result from it. Why, many persons might gather almost enough gooseberries, green and ripe, to pay their rent, and would still have plenty left for their own consumption. Once make fences of them between fields, and there would hardly be any limit to the quantity of this wholesome fruit. For this purpose, the plants should be planted a foot apart, and pruned into a sharp-pointed pyramid, say 2 ft. or 3 ft. wide at the bottom, and to a point at the top, the height ranging from 3 ft. to 5 ft., according to circumstances. Lines of this sort would not grow fruit of an ounce weight, but they would grow any quantity of useful fruit of medium size and of fine quality. It is to be hoped that many persons may decide to stub up their old thorn hedges, and substitute Gooseberries at the earliest opportunity.—D. T. Fish, *Hardwicke.*

## THE BARRINGTON PEACH.

WITH AN ILLUSTRATION.

THERE can be no apology necessary for calling attention to this old, well-known, and magnificent Peach. It is the one variety that is almost indispensable in the smallest collection. After the glut of the mid-season varieties, such as Noblesse, Royal George, and Bellegarde is past, then we find out the merits of this grand Peach, for were it not for the Barrington, a blank would almost ensue; with it, however, the supply is kept up till the Late Admirable and others come in. Moreover, as regards our exhibition-tables, the most magnificent dish of Peaches to be generally seen there is the Barrington.

The illustration here given, [and drawn from samples of the Markly Admirable, then supposed to be new], does this variety but scant justice, the fruits being much larger than those represented. We have frequently gathered specimens varying from 8 oz. to 12 oz. in weight each. The fruit may be described as very large, of a roundish-ovate form, terminating at the apex in a very prominent nipple. The skin is very downy, very thick, of a greenish-yellow colour, marbled and flushed with red on the exposed side. The flesh is greenish-yellow, tinged with deep red next the stone, of a brisk richly vinous flavour, and quite first-rate quality. The flowers are large; thereby it is distinguished from the Late Admirable, which has small flowers. The glands are round. The tree is of a hardy, vigorous constitution, an excellent bearer, and forces well.

Like all other good fruits, the Barrington Peach has many synonyms. It is known as the *Buckingham Mignonne*, also as *Colonel Ansley's.* A few years ago it received another, having been exhibited before the Fruit Committee of the Royal Horticultural Society by Mr. Knight, of Hailsham, Sussex, under the name of *Markly Admirable*, when from the wonderful excellence of its quality, and its fine appearance, it was awarded a First-class Certificate as a new variety. This notion was, however, upon closer investigation dispelled by Dr. Hogg, who proved beyond question that it was nothing more than the true Barrington.—A. F. B.

## NOTABLE NEW PLANTS AND FLOWERS.

[F.C.C. = First-class Certificate; B.C. = Botanical Certificate; F.C. = Floricultural Certificate.]

ADIANTUM Zahnii [B.C.].—A distinct stove fern, with light green pinnate fronds, and broad pinnæ of a thick, leathery substance.—*Messrs. Veitch & Sons: R.B.S.*, *June* 13.

Ageratum Little Gem [F.C.].—A reproduction of the well-known *Imperial Dwarf,* as originally shown by Mr. Chater.—*Mr. C. Turner: R.B.S.*, *June* 13.

Areca nobilis [B.C.].—A highly ornamental and graceful palm, with large bright green pinnate leaves.—*Mr. W. Bull: R.B.S.*, *June* 13.

Calamus ciliaris [B.C.].—A very elegant, slender-growing, pinnate palm, highly valuable for decorative purposes.—*Mr. W. Bull: R.B.S., June* 13.

Croton volutum [B.C.].—This was formerly shown as *C. cornigerum;* the deep green leaves have golden-yellow blotches and streaks, and are curled inwardly in a very curious manner.—*Mr. W. Bull: R.B.S.*, *June* 13.

Cypripedium Parishii [B.C.].—Sepals and petals yellowish-green, marked with purple; the lip green; stems bearing several flowers at one time.—*Mr. B. S. Williams: R.B.S., June* 13.

Clematis purpurea elegans [F.C.C.].—A rich purple-blue variety of the lanuginosa type, with well-formed flowers.—*Messrs. Cripps & Son: R.H.S.*, *June* 4.

Dendrobium amœnum [F.C.C., B.C.].—In the way of *D. transparens;* the white petals are tipped with rosy-purple, the lip yellow, and the flowers perfumed like violets.—*Mr. W. Bull: R.H.S., June* 4; *R.B.S.*, *June* 13.

Dracæna Goldieana [B.C.].—A most distinct and curious W. African species, the dark green leaves being handsomely banded with greyish-white.—*Mr. W. Bull: R.B.S.*, *June* 13.

Dracæna hybrida [B.C.].—A bold-growing stove shrub, the broad, deep green erect leaves having creamy-white and deep rose streaks and margins.—*Mr. W. Bull: R.B.S.*, *June* 13.

Erythrina Parcellii [B.C.].—A vigorous-growing, variegated stove shrub, the green leaves veined with bright yellow, and having a handsome appearance.—*Mr. W. Bull: R.B.S.*, *June* 13.

Gloxinia Queen of England [F.C.C.].—A drooping variety, with very large white flowers, having a deep crimson blotch on the throat.—*Mr. J. Gee: R.H.S., June* 4.

Lilium phillippense [B.C.].—A species with large white trumpet-shaped flowers, like *L. longiflorum*, but with narrower leaves, and quite distinct in character.—*Messrs. Veitch & Sons: R.B.S.*, *June* 13.

Macrozamia plumosa [F.C.C., B.C.].—Said to be nearly or quite identical with *tenuifolia*, with handsome arched fronds, having numerous narrow leaflets.—*Mr. W. Bull: R.H.S.*, *June* 4; *R.B.S.*, *June* 13.

Nephrolepis davalloides furcans [B.C.].—A variety having bright green fronds and forked pinnæ.—*Messrs. Veitch & Sons: R.B.S.*, *June* 13.

Odontoglossum Roezlii [B.C.].—A handsome white-flowered species, with purple blotches at the base of the petals.—*Mr. W. Bull: R.B.S.*, *June* 13.

Pelargonium (show) Crown Prince [F.C.].—Orange lower petals, with slight dark stains; dark top petals; fine form.—*Mr. W. Nye: R.B.S., June* 13.

Pelargonium (show) Gipsy [f.c].—A very dark and distinct painted flower; white throat, and fine quality.—*Mr. W. Nye: R.B.S., June* 13.

Pelargonium (show) Lord Nelson [f.c.].—Pale purple lower petals, dashed with orange, dark top petals, and white throat; novel and distinct.—*Mr. W. Nye: R.B.S., June* 13.

Pelargonium (show) Mrs. Andrew Matthews [f.c.].—Soft salmon-pink, dark blotch on top petals, and large white throat; fine form.—*Rev. H. Matthews: R.B.S., June* 13.

Pelargonium (show) Sybil [f.c.]—Delicate salmon-rose, dark blotch on the upper petals; good form.—*Mr. W. Nye: R.B.S., June* 13.

Pelargonium (fancy) Atlantic [f.c.].—Rosy-purple lower petals; reddish-maroon upper petals; white throat, and good form.—*Mr. C. Turner: R.B.S., June* 13.

Pelargonium (fancy) Countess of Dudley [f.c.].—Pale lower petals, pencilled and blotched with rosy-maroon; upper petals rosy-maroon; distinct, but a little rough.—*Mr. C. Turner: R.B.S., June* 13.

Pellæa mucronata [f.c.c.].—A beautiful small bipinnate fern, with glaucous fronds; sometimes referred to Platyloma, and thought to be hardy; quite distinct-looking among ferns.—*Messrs. Backhouse & Son: R.H.S., June* 4.

Phyllotænium Lindeni [b.c.].—A very handsomely variegated aroid, with large bold leaves of a green colour, handsomely veined and marked with ivory-white.—*Mr. W. Bull: R.B.S., June* 13.

Pleocnemia Leuzeana [b.c.]—A bold-growing stove semi-tree fern, with handsome, ample spreading triangular much-divided fronds of a bright deep green hue.—*Mr. W. Bull: R.B.S., June* 13.

Rose (h.p.) Rev. J. B. Camm [f.c.].—Pale rose-pink, a very pleasing hue of colour; full, and of good form.—*Mr. C. Turner: R.B.S., June* 13.

Sarracenia Stevensii [f.c.c., b.c.].—A hybrid, raised between *S. purpurea* and *S. flava major*, by Mr. Stevens, of Trentham, but quite distinct in character. —*Messrs. Veitch & Sons: R.H.S., June* 4; *R.B.S., June* 13.

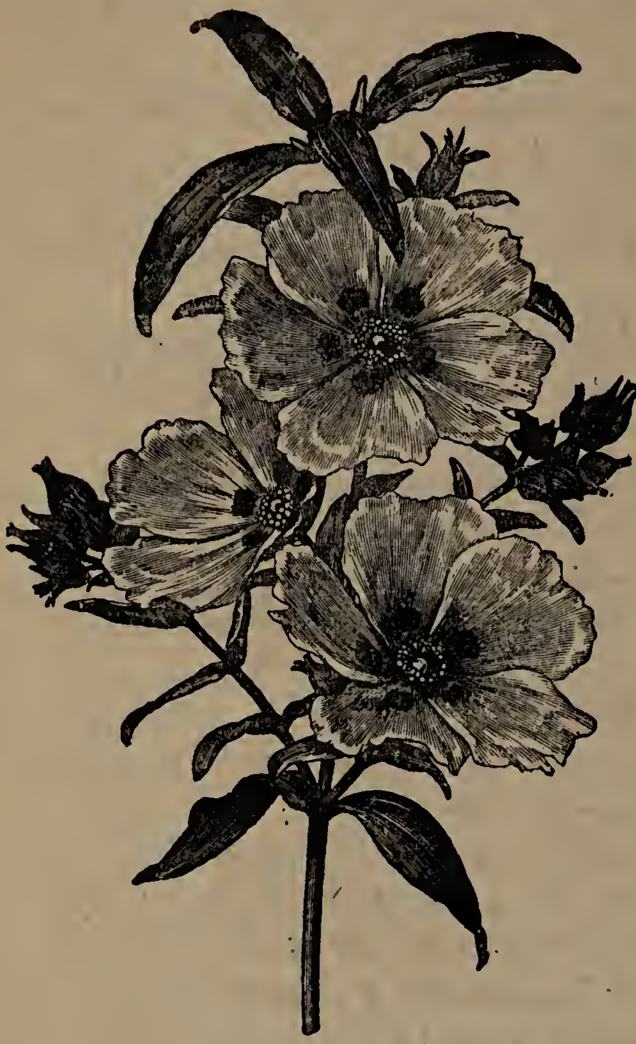
Sarracenia Williamsii [b.c.].—Another hybrid, having the same parentage as the preceding, but quite distinct in character.—*Mr. B. S. Williams: R.B.S., June* 13.

Scolopendrium vulgare cristatum viviparum [b.c.].—A distinctly crested form of the Hartstongue fern.—*Mr. B. S. Williams: R.B.S., June* 13.

Vanda limbata [b.c.].—A pretty species, intermediate in character between *V. tricolor* and the old *V. Roxburghii;* the sepals and petals deep chocolate-brown, slightly spotted; the lip bright rosy-lilac.—*Mr. B. S. Williams: R.B.S., June* 13.

## THE GUM CISTUS.

AT this season of the year, when its lovely blossoms are being produced, the Gum Cistus will stand little in need of encomiums to draw attention to its beauty. In dry, warm soils, in which it thrives best, it is indeed a most charming and attractive plant, and it is one of the easiest of hardy shrubs to cultivate, requiring practically no attention whatever after planting, except



CISTUS LADANIFERUS.

such as may serve to regulate its growth, and direct its progressing branches into a symmetrical form of development. On a sunny rock-bank it is perfectly at home, and in such a situation, which secures a profusion of blossoms, it is a most telling shrub. The accompanying figure, from Mr. Hemsley's *Handbook of Hardy Trees and Shrubs*, one-third the natural size, scarcely does justice to it, the pure white and strongly contrasting dark spots, one on each petal, being more conspicuous.

The Gum Cistus, *Cistus ladaniferus* of botanists, is a native of Portugal, and produces its flowers during the present month. There are several varieties of it, no doubt of seedling origin. The present is known from its near ally *C. Cyprius* by its sessile leaves and clustered flowers.—T. MOORE.

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## WALLICHIA CARYOTOIDES.

IN the *Wallichia caryotoides* we have a dwarf stemless stove Palm of a distinct and ornamental character. It is a native of Assam and Chittagong. The inflorescence is terminal, and the stem perishes after flowering, young suckers being developed from the base. The species appears to be monoecious, since the plant represented in our figure, taken from the *Revue Horticole*, only bore male flowers. It is, as already mentioned, stemless, producing leaves from 6 ft. to 8 ft. long; these are pinnate, with a pulverulent rachis ; the leaflets are about a foot in length, and four or five inches broad, cuneate at the base, sometimes dentately lobed on the edges, sometimes erosely toothed, deep green above, and silvery beneath. The inflorescence is ovoid, at least a foot in diameter, encompassed by foliaceous reddish-coloured spathes, and consisting of numerous branchlets (about 300), bearing tubular yellowish or purplish flowers, numbering some 70,000 to 80,000. The allied W. densiflora when in flower is a conspicuous plant, on account of the colour of its spathes, which are dark purple streaked with yellow ; these separate, and then a dense cluster of nearly white spadices appears, as shown in our figure ; its female spadix is a compound spike, with divaricate branches, thickly covered with violet-coloured ovaries.

These Wallichias, being of dwarf habit, are well suited for those who have but little hothouse accommodation. Like other palms, they delight in strong, moist heat, but may be introduced during summer to the greenhouse. They are increased by seeds, when obtainable ; also by suckers, which should be removed with caution, in order to get them fairly established.—M.

WALLICHIA CARYOTOIDES.

## THE FANCY POLYANTHUS.

I FEEL that in using the term 'Fancy' I am adopting one of a somewhat indefinite character, but yet one which is necessary for convenience' sake. I employ it to distinguish from the gold-laced Polyanthus of the florists quite a new race, remarkable for the brilliant colour they possess, their enormous trusses of flowers, their vigorous growth, and remarkable strength of constitution. About six years ago I received some seed of Polyanthus from Germany, in the belief that I was getting a fine strain of the gold-laced type. I was struck with the vigour of growth shown in the seedlings, and when they bloomed, even more so with their size and the beauty of the hues of colour. I saw that by means of intelligent selection there could be attained a race of border Polyanthuses of great value for decorative purposes, and the result of the intervening year's work has been in every way most satisfactory, as shown in flowers ranging in hue from white to rich maroon-crimson, including lilac, violet, mauve, and purple shades, flowers of enormous size and fine shape, a strong plant throwing as many as 8 or 10 trusses, which form an immense bouquet. They are the admiration of every one who sees them, and they afford spring gardeners what has hitherto been much required in their vernal displays, striking dark hues of colour.

I ought to have said that the pollen of some beautiful high-coloured single Primroses was also used in the strain, and the result is seen in that many of the plants throw up in the first instance very early in the season flowers on single stems, in the way of the common Primrose, and after that their trusses of bloom. I am too sensible of the beauty of the gold-laced strain of Polyanthus, to wish to depreciate it in any way ; but for decorative value in borders in early spring, the Fancy Polyanthus is far superior to the original type.

The seed from which I shall obtain next year's seedling plants has now been sown some six weeks, in a shallow box filled with a light free soil, and placed on a shelf in a cold greenhouse. Already the surface of the soil is dotted with many plants making their third leaves. Polyanthus-seed should always be sown early, so as to secure strong plants ; if sown in July and August, few of the plants will flower, and one has to wait another season to see what floral beauties they will unfold. My soil is a deep, moist, and somewhat heavy sandy loam, and previously to planting out the seedlings this is deeply dug, and a good dressing of decayed leaves and a little dung applied. The Polyanthus loves a deep soil on a cool bottom, where it can root deeply ; a shallow soil on a dry bottom is death to many of the plants. As far as possible I have tried to secure large circular, stout, flat pips, and thrum-eyes, allied with striking definite colours. I get fine flowers with pin-eyes, but unless there is something of value to breed from, they are all thrown away. The seedling plants flower very early, and I need scarcely say how much pleasure I derive from watching the opening blossoms ; it is a source of gratification so peculiar that it cannot be expressed in words, and it can only be understood by those who are interested in raising flowers.—R. DEAN, *Ealing*.

## GARDEN GOSSIP.

AT the Florence International Exhibition, Dr. Moore, of Glasnevin, produced in blossom a new hybrid Sarracenia, which it has been suggested should have the name of *Sarracenia Moorei*. This, it is believed, was the first hybrid Sarracenia which had ever been flowered. It was described to be the offspring of Sarracenia flava, fertilised with the pollen of Sarracenia Drummondii. The plant is as nearly as possible intermediate between those two noble species. Those who have cultivated Sarracenias successfully, know that during the months of April and May most of the species flower and produce young leaves, which after perfecting the plants rest six weeks or more, when some of the kinds produce a second crop of leaves, which are more beautiful than those of the first crop, and remain fresh during the winter. This is especially the case with Sarracenia Drummondii, the richly coloured purple and white pitchers of which prove to be never-failing objects of interest. Sarracenia flava does not make the second growth of leaves in so marked a manner, but rather inclines to rest during the winter months. Now it is in the mixture of the leaves that the intermediate state of the hybrid is so strikingly exemplified. It makes its second growth of winter pitchers similar to S. Drummondii, and they are nearly as highly coloured, but they decay much sooner than those of the parent species, and thus more closely resemble those of the female parent, S. flava. Further, the large stature of the plant, which is nearly 2 ft. high, the purple colour of the flowers, and, indeed, everything connected with it, show that it holds an exactly intermediate rank between the parent plants.

—— SINCE the exhibition at Florence of Dr. Moore's hybrid Sarracenia, two others have been made known, namely, *Sarracenia Stevensii*, raised by Mr. Stevens, of Trentham, and *Sarracenia Williamsii*, raised by Mr. Williams, of Holloway. These two plants have the same parents, namely, S. purpurea and S. flava, but they are so different in aspect, that we have little doubt the crosses were made the reverse way. Mr. Stevens's plant more nearly resembles S. purpurea, though it has an erect habit, since it combines the bulging form and purple veining and coloration of that species. Mr. Williams' plant, on the other hand, has a greater resemblance to S. flava, being larger and erect, less coloured, with a large lid, but having the pitcher more broadly winged, and in this respect approaching its other parent. These hybrids are plants of very great horticultural interest.

—— THE *Eriocaulons*, represented in this country by the diminutive *E. septangulare*, become in Brazil tall branching objects of great interest and beauty. One of these, a noble specimen, is now, we learn, growing at the garden of the Luxembourg in Paris, where it was lately in bloom. The plant appears to have been raised from seed derived from South Brazil. The seeds were sown on moist sphagnum by M. Rivière, and soon germinated. In 1870, during the siege of Paris by the Germans, M. Rivière, from the scarcity of fuel, was obliged to crowd all his more valuable plants into the Orchid-house, and to abandon the rest. But on January 5, 1871, a shell fell into the house, and though it buried itself in the ground without bursting, the wind produced by its passage upset and dispersed the plants in all directions. Next day, in seeking to collect and save the plants which were yet not destroyed, two young Eriocaulons were found, which, since that time, have been kept in sphagnum in a greenhouse. One began to show flower last winter, and was transferred to a stove, where it has flowered perfectly well. Great difficulty has hitherto been experienced in the cultivation of these plants, which naturally inhabit tropical bogs.

—— AMONGST Ornamental Hardy Shrubs, which are at present neglected by planters, we must name the *Genista virgata* of Madeira, a plant which appears to be quite hardy, since it stands uninjured in the low damp climate of the Knap Hill Nurseries, where we saw it in great beauty a short time since, and where the exquisite fragrance of the flowers, which resembles that of Genista canariensis, was pointed out to us by Mr. Waterer. It is a slender-growing plant, of a gracefully spreading or arching habit, very twiggy, simple-leaved, and at this season of the year profusely covered with the deep golden-yellow pleasantly fragrant flowers, while it is quite distinct in aspect from any of the other Leguminosæ commonly cultivated. We shall shortly publish a figure of this plant.

—— THE *Gardeners' Chronicle* informs us that a favourite edging plant in Italy is *Ophiopogon japonicum*, and judging from the situations in which it was met with, it stands the ill-effects of shade and drought. In the Cascine at Florence it is used largely under the avenues of trees, and near Genoa it is employed for similar purposes.

—— ONE of the most conspicuously attractive of summer trees is the *Golden Variegated Chestnut* (Castanea vesca aureo-variegata), the bold, regularly-formed leaves of which are broadly and distinctly, though unequally, bordered with a rich creamy yellow. A fine tree in the Knap Hill Nursery is just now a most telling object. Those who wish for effective colours, to light up their pleasure-grounds or park scenery, should not fail to introduce this free-growing tree to appropriate positions. Though by no means a golden tree as to its cost, it is certain to win golden opinions from all who see it well developed in suitable situations.

—— THE *Choisya ternata* is a remarkable evergreen Rutaceous shrub, with ternate fragrant leaves of a deep green colour, and dotted like a Myrtle, and bearing white flowers in handsome axillary clusters. This plant is a native of Mexico, and during the investment of Paris by the Germans, though considered a stove plant, had to take its chance amongst hardy ones. Quite unexpectedly the plant flourished, and in the latitude of Paris has proved itself one of the hardiest and most ornamental of shrubs. Probably it would also prove hardy in the south of England and Ireland, and specially by the sea. If so, we have in *Choisya ternata* a most desirable addition to our hardy shrubs.

—— M. DUVAL-JOUVE, at a recent meeting of the Botanical Society of France, recommended the use of the *pith of the Virgin's Thistle*, Silybum Marianum, as a good material for use, instead of Cork or Elder-pith, for making sections of leaves or other thin substances for microscopic purposes; and next in value to the pith of this Thistle, he recommends that of Ailantus glandulosa. In any case, the pith should not be used fresh, but should be taken from old dry shoots. This hint will be useful to those who have experienced the difficulty of getting flat sections with the aid of cork, and the certainty of blunting the razor.

—— DR. FARLOW, an American botanist, has lately published the results of an observation, according to which the fronds of *Pteris serrulata* may be produced directly from the prothallus, which is formed when the spore germinates, without the agency of archegonia. The general rule is that the spore in germination produces a prothallus, on which are developed both antheridia and archegonia. The former contain spermatozoids analogous to pollen, which latter, making their way to the archegonium, fertilise a cell contained within it, and as a result of this fronds are formed. If Dr. Farlow's observations be confirmed, the case will be analogous to the formation of adventitious buds on leaves. Usually the prothallus has no vessels, but in the case in question, a number of scalariform vessels were developed.

—— THE Algerian *Viola Munbyana* is a well-marked species, growing on the summits of the whole range of the Atlas Mountains in Algeria. In Munby's *Flora of Algeria*, published in 1847, it was mistaken for *V. calcarata*, and in Desfontaines' *Flora Atlantica*, 1808, it was confounded with *V. cornuta*. Messrs. Boissier and Reuter first described it as a new species in their *Pugillus Plantarum Novarum* in 1852. Although sufficiently distinct from either *V. cornuta* or *calcarata*, it comes very near *V. lutea*, and the length of the spur of the flower appears to be the only well-marked distinction. Like *V. lutea*, its flowers are both entirely violet and entirely yellow, and clumps of it will have as many violet as yellow flowers. In cultivation it has withstood the hardest winters, generally beginning to flower about the end of February, and attaining its greatest beauty in May.

—— THE correct name of the plant called in gardens Rhynchospermum jasminoides is *Trachelospermum jasminoides*, a name given by Lemaire, in the *Jardin Fleuriste*, vol. i., 1851, t. 61. It has also been called *Parechites Thunbergii* by Asa Gray.

## Obituary.

—— PROFESSOR MEISNER, of Basle, a most accomplished botanist, and a genial, amiable man, died on May 2, in his 64th year. Professor Meisner is well known as the author of several accurate monographs in De Candolle's *Prodromus*, and other publications, and of a most laborious and useful conspectus of the *Genera of Plants*.

—— **Mr. Charles Rae**, gardener to Sir G. H. and Lady Boswell, at Blackadder, Berwickshire, died on May 11, aged 59. Mr. Rae, when a young man, was for some years employed under Mr. Toward, at Bagshot Park, and Mr. Charles McIntosh, at Claremont. He was afterwards gardener to the late J. Jackson Blandy, Esq., at High Grove, near Reading; and for several years, commencing in 1846, he was a frequent exhibitor of Orchids, and the winner of many Banksian and Knightian medals at the meetings of the Horticultural Society in Regent Street. He subsequently became gardener to Niel Malcolm, Esq., Calton Moor, Argyleshire, whom he left to take charge of the gardens at Blackadder.

—— **M. Antoine Laurent Apollinaire Fée** died on May 21, in his 85th year. In his early days, M. Fée served in a medical capacity in the French Army, and in 1832 became the principal professor and pharmaceutist at Strasbourg, holding amongst other offices that of Director of the Strasbourg Botanic Gardens, and Professor of Natural History to the Faculty of Medicine of that city. M. Fée published several memoirs on Ferns, many of them illustrated; the figures being exceedingly characteristic, indeed, they are amongst the best figures of Ferns extant. At the time of the Franco-German war he left Strasbourg, and has since lived in retirement; until, at a ripe old age, he passes from us to his well-earned rest.

—— **Mr. William Beattie Booth** died on June 18, aged 70. Mr. Booth's name has been familiar amongst gardeners for the last half-century. He commenced his horticultural career in the gardens of Scone Palace, Perth, under his uncle, Mr. Beattie, and from thence removed, in 1824, to the Horticultural Society's Garden at Chiswick. In 1825 he was appointed garden clerk there. In 1830 he went as gardener to Sir C. Lemon, of Carclew, where he remained till 1853. In 1858 he became assistant-secretary to the Horticultural Society, but after the removal of the Society to South Kensington the business became too much for his failing health, and he resigned this office, retiring into private life. Mr. Booth was a most estimable man, thoroughly conversant with the science and practice of gardening, and especially remarkable for his kindly and gentlemanly bearing towards all who came in contact with him.

## GARDEN WORK FOR JULY.

### FLOWERS.

FLOWER-GARDENS will soon be at their best, and in order to render them thoroughly enjoyable and satisfactory, assiduous attention must be directed to insure perfect order and neatness, both as regards the general keeping, and the exactitude with which the training of the plants is conducted. *Clematis* and other hardy climbers must have timely attention as to training, as when they are allowed to become entangled, it is almost impossible to unravel them; the pegging-down of *Verbenas* and trailing plants in beds must also be proceeded with. In the herbaceous borders many things will require tying-up, and otherwise training; the fastenings upon Dahlias and Hollyhocks should be examined from time to time. Frequent stirrings of the soil, so as to loosen the surface, will greatly expedite the growth of the plants, and save labour in watering.

When watering is necessary, let it be given in sufficient quantity to thoroughly moisten the soil. Avoid surface-sprinklings amongst flowering-plants, which has a deleterious effect; but foliage-plants will benefit in bright sunny weather by being sprinkled overhead in the evenings, as it both refreshes and cleanses the leaves from dust. *Carnations* should be layered as soon as the shoots are sufficiently advanced; and pipings put under hand-glasses, with the slightest bottom-heat, root freely. *Pinks* also propagate from pipings under hand-glasses, in light sandy soil.

*Roses:* As soon as the first flush of bloom is over upon the autumn-blooming sorts, I should have the strongest shoots shortened back and thoroughly cleansed from fly, encouraging growth by liberal applications of manure-water, which will go far towards preventing mildew and prolonging the flowering season. Proceed with budding and removal of suckers. Roses that bloomed in pots must now be examined and re-potted, using a sound fibrous turf enriched with rotten cow-dung, with a dash of sand or charcoal, to insure porosity. It is important in potting that the soil is rammed firmly about the roots. For Tea, and the more delicate-growing sorts, use a more friable compost; after potting place them in a shady situation until established, frequently sprinkling overhead, and inuring them to full exposure as soon as they are established. Clip all kinds of hedges, using the knife upon large-leaved subjects.

*Conservatory:* This should now be kept shaded, and as cool as possible by frequently sprinkling the surface of the beds, so as to counteract excess of atmospheric dryness, which will greatly prolong the blooming of such plants as *Fuchsias*, *Achimenes*, *Liliums*, *Tydeas, Gloxinias*, *Balsams, Pelargoniums,* and *Campanula pyramidalis*, &c. This last, with which the houses are now gay, is one of the most effective flowering-plants we possess, producing its stately masses of blue and white flowers in such grand profusion, that it ought to be grown in every garden where summer decorative plants are valued.

*Orchids:* Look diligently after insects, and promote maturation in such as have perfected their growth, by airing more freely, and slightly reducing the supply of water at the root. If any require shifting, they should be seen to at once, and guard against over-shading.

*Stoves:* Small plants must have attention as to shifting. *Gardenias*, *Ixoras*, &c., which were potted early in the season, will now require a shift, or they will soon show signs of exhaustion. *Poinsettias*, *Euphorbias*, and such quick-growing subjects, must have timely attention as to shifting, being careful to promote a sturdy habit of growth. Such specimen plants as are now growing in moist stoves, and completing their growth, should be gradually inured by exposure, so as to be induced to stand the more airy and drier temperature, which is necessary to thoroughly ripen the wood of flowering-plants.

*Greenhouse:* Plants that are in an advanced state of growth, such as *Acacia*, *Cytisus*, &c., may now be placed out-of-doors, in a position where they are slightly shaded from the sun. Any specimen plants that are in an unsatisfactory state should be examined at once and shifted, as also may young stock requiring a shift, afterwards carefully watering at the root and shading from bright sun until re-established. *Lapagerias*, whether grown in pots or planted out, must have an abundant supply of moisture whilst they are making growth. *Azaleas:* As these are never benefited by being placed out-of-doors during the summer months, where but one structure is allotted to their use, it becomes somewhat perplexing to divide the early forced section, which have now finished their growth, from those that are in an active state. I have known the old white and amœna to flower freely, when placed in a sheltered situation to harden their growth, for a month or two in the open air; and where a north airy house cannot be afforded them after this stage of development, such a situation is to be preferred to keeping them in a humid temperature.

*Soft-wooded Plants* should be potted on before they become pot-bound. *Cinerarias* and *Primulas* should be shifted on, and seed sown for successional blooming. Keep under insect pests by means of fumigation, and guard against checks from neglect in watering or ventilating. *Pelargoniums* that are past blooming should be fully exposed, so as to ripen their wood, previously to cutting them down.—GEO. WESTLAND, *Witley Court.*

## FRUITS.

*Pines:* Where tan is used for bottom-heat, care should be taken that the heat is not too violent, or it may greatly damage the young roots, and from the effects of this they would not soon recover. All plants intended for fruiting early next season should now be shifted into their fruiting-pots; also shift succession plants as they may require pot-room, but do not reduce the ball, merely remove the drainage. Use free turfy loam, with a third part rotten manure; do not press the soil too firmly in the pots; water freely, and air according to the state of the weather; keep up a moist warm temperature in the fruiting-pit at night.

*Peaches* and *Nectarines:* As soon as the crop is gathered in the early houses, go over the trees, and cut away all useless shoots, such as are not required for fruiting next season, or for filling vacant spaces. When this is done, give the trees a good washing, and water the borders if dry. If the trees show signs of weakness, a good soaking of liquid manure would greatly help them for another season. Keep the late houses well syringed and watered up to the time the fruit is ripening; expose the fruit to the sun, and give air at all times.

*Vines:* Ripe Grapes should be kept cool by admitting plenty of air, and as soon as the crop is cleared, give the Vines a good washing with the garden engine. Allow the laterals to grow on, so that the foliage will remain in a healthy state for some time to come. In the late houses, where the fruit is swelling, a moist growing heat should be maintained. Use a little fire-heat in chilly weather to these as well as late Muscats. Tie-in the shoots, and thin the berries in the latest house; air freely in the early part of the day, but syringe and close as soon as the sun is off the house in the afternoon. On no occasion should Vines in pots be allowed to get *dry.* The growing stock should be assisted with liquid manure: also those on which fruit is swelling.

*Melons:* Plant out the last crop early in the month. Keep the advancing crops well-syringed and watered till they approach maturity; give plenty of air, and in hot days the lights may be drawn off altogether till closing time.

*Figs:* Give abundance of air and moisture, especially in the case of those where the second crop is swelling.

*Hardy Fruit:* We advised in last-month's calendar the thinning and stopping of the shoots of all trained fruit-trees; if any should remain undone, they should be proceeded with at once, and at the same time make the final thinning of *Apricots* and *Peaches.* *Plums* and *Pears* should also be thinned where the crop is heavy. Young *Peach* and *Apricot* trees that are very vigorous should be stopped, to induce them to make growth of a fruitful character. Thin and stop the shoots of *Figs* as soon as they have made a growth of about six inches.

*Strawberries:* The late sorts should be well watered if the weather be hot and dry; tie up the heavy fruit, and place nets over them. Layer runners for new plantations, and for forcing.

*Orchard-houses* will now require plenty of air night and day, when the weather is warm. Assist the trees occasionally with liquid manure, and at no time should they be allowed to suffer from want of water.—J. POWELL, *Frogmore.*

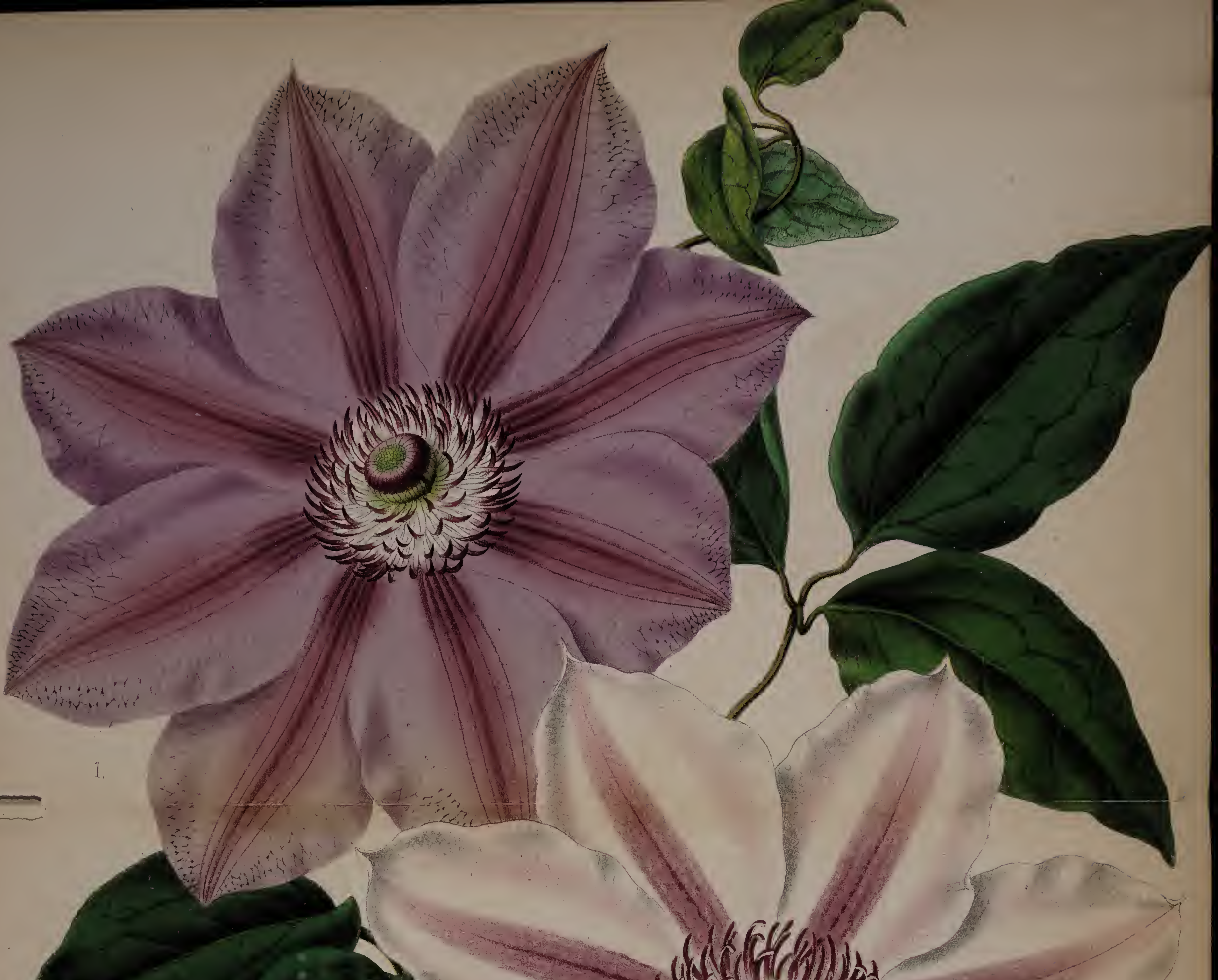
## VEGETABLES.

In a too general way kitchen-garden crops will be unusually late in perfecting themselves this season, and this will doubtless militate greatly against the perfection to which they should attain. If the successional sowings of *Peas* and *Beans* (both Broad and Kidney), have been continued without break, there will not fail to be a moderate successional supply of each. It is difficult to determine what kind of weather we are likely to experience, although judging from such signs as we generally go by, we cannot expect a wet season. Should those views prove correct, the free and constant use of the watering-pot cannot be too strongly advocated. By its constant use, we do not, however, intend to convey the idea that the culturist is to be continuously slopping water about and around the same kind of plant or the same plants collectively; its constant use will be requisite to assure to all at least a modicum. Proceed upon a basis of sound judgment and forethought, so as not to waste either valuable water, or neutralize in any degree the value of such labour as may be expended on it. All water given to vegetables (growing vegetables not being like permanent trees or shrubs), should be projected as directly down to the roots as possible. Every drop that is permitted to run about the surface of the soil and above-ground, is literally wasted. In watering, therefore, amongst or between vegetables, make where possible a drill, or so open the soil as to admit the water more readily down to the roots, and immediately the water is given, either return the soil on to its previous site, or place a mulching of litter, manure, cocoa-nut fibre, spent hops, or other materials which may be in possession.

As I have already stated, properly cultivated ground, or such as has within itself the necessary stamina, will need less attention than such as has been, owing to whatever cause, neglected. Soils that have been indifferently done, therefore, may be aided very materially by surface-mulchings, and the aid would be very greatly enhanced if the surface were first watered over and the mulching immediately applied, as by so doing the natural or latent moisture in the ground below would gradually rise to meet this fresh superficial watering, and the intermediate soil wherein the roots subsist, become more softened thereby, so as to yield food in greater quantity, and such as the delicate root spongioles can more readily assimilate. *Vegetable Marrows* and *Ridge Cucumbers* should, now that they may be supposed to be growing freely, have particular attention paid to them. A good mulching of rotten manure may be advantageously applied to them in either case. Pinch back the stronger-growing shoots upon both, and so arrange the leaves and shoots that they do not unduly shade each other, or grow too thickly together. *Cucumbers* in frames would well repay similar attention, and if the haulm and foliage become at all strong, and such as to fill the space densely and rise too closely up to the glass, let the frame be elevated upon bricks, and the interstices so formed be afterwards filled in with manure.

Sow seeds of the following during the third week of the month:—*Cabbages* of the Enfield Market type, *Peas* of a medium season kind, and an early podding sort, *Lettuce*, *Endive*, *Turnips*, *Radishes*, perennial or *Flanders Spinach*, *Onions* of the Giant Rocca kind, &c. Prepare a good breadth of ground during any rainy period that may exist, for sowing with *Spinach* during the early part of next month, as we hope to advise; if the ground be dug up during rainy weather at this period, it will become in a far better state for the crop than if left until the last moment, and it then happens to be an arid period, with perhaps the soil very dry below also. Thin-out young crops of *Turnips*, and hoe freely amongst all growing crops where practicable, frequently, to keep down weeds, &c. Continue to transplant *Celery* into permanent trenches, removing them from the seed-beds with all the soil possible attached, and watering them well subsequently, nor permit them to get even slightly dry at the root at any time during the remainder of the summer.

Those who delight in possessing young *Carrots* and *Potatos* at any or all seasons, may now plant the latter and sow a few seeds of the former, of the French or Short Horn kinds.—WILLIAM EARLEY.



J. L. Macfarlane, del.

Chromol. G. Severeyns Brussels.

Clematis

1. Stella. 2. Fair Rosamond.

# NEW SPRING-FLOWERING CLEMATIS.

WITH AN ILLUSTRATION.

WE are indebted to Messrs. George Jackman and Son, of the Woking Nursery, who have done so much to popularise the Clematis as a garden flower, for the present opportunity of publishing figures of two of their splendid varieties of the spring-flowering section of the family representing *Clematis patens.* Nothing approaching these, as they have been exhibited by Messrs. Jackman for the last two seasons, has yet appeared; the size and substance of the flowers, together with the free-blooming habit and vigour of the plants, being most remarkable. These have both won certificates, and several other varieties of the same patens section, and of very great merit, have also been exhibited and certificated, especially those named *The Queen*, a delicate mauve, *Vesta*, a satiny-white, *Miss Crawshay*, a soft Solferino-rose, *Samuel Moulson,* a mauve, with reddish bars, and *Mrs. George Jackman*, a superb white, with extraordinarily large flowers.

The varieties now figured are STELLA (fig 1), and FAIR ROSAMOND (fig 2). They were both awarded First-class Certificates by the Royal Horticultural Society in 1873, and certainly both well deserved that mark of distinction. They belong, as already mentioned, to the patens section, distinguished by its spring-flowering habit and its ternate foliage, and they both have flowers which are very perceptibly fragrant. Stella, as will be seen from the figure, is an eight-sepaled variety, the sepals elliptic, oblong and stalkless, so that they form a full, solid-looking flower close up to the richly-coloured stamens. The colour is a deep bluish mauve, with a conspicuous bar of reddish plum-colour down the centre of each sepal; the filaments are white, and the anthers of a chocolate-purple, forming a conspicuous central tuft. Fair Rosamond has also eight-sepaled flowers of the same form and imbricating character as those of Stella, but they are of a blush-white colour, and have a more or less distinct wine-red bar extending from the base of the sepals nearly to the apex, but becoming paler upwards; the beauty of this variety is much enhanced by the tuft of deep-coloured stamens, which occupies the centre, and which have the filaments purplish-red, white at the very base only, the anthers being of a darker purple. The scent in a warm close atmosphere is intermediate between that of primroses and violets, and is almost equal to that of the latter flower. Some idea of its free-blooming character may be formed from the fact that a plant grown over a balloon-shaped trellis, 2 ft. high, and 1 ft. 3 in. through, bore at one time sixty-five of its fine showy blossoms. There can be no doubt that we have here two of the very best of the early-flowering sorts.

These varieties of the patens group prove to be exceedingly ornamental when properly cultivated, either as permanent indoor hardy green-house creepers, or grown in pots on balloon-shaped or cylindrical trellises for removal to the Conservatory whilst in blossom.—T. MOORE.

# THE FRUIT CROPS OF 1874.

VARIABLENESS or change is their chief characteristic. Throughout the country we find—here a crop taken, there one left. It seems almost as if the very spirit of caprice had regulated the distribution and destruction of the Fruit Crops of the season. We seem to know as yet comparatively little of the extremely subtle influences on which hang our chances of a crop of fruit in the open air. Neither heat nor cold, shelter nor exposure, elevation nor depression, geological formation nor atmospheric conditions, skill nor the lack of it, will explain half the facts in the actual state of the fruit crop, and its extreme variation within a circuit of a few miles. Within the most limited area, the whole of the differences, from extreme fertility to no fruit at all, may be found; while the same varieties run from abundance to *nil*, within eye-shot each other.

Great, indeed, are the mysteries of fruit-growing in the open air, and with many of the more tender varieties it is becoming more of a mere lottery year by year. Nor is this greatly to be wondered at, for what two destroyers can be more subtle or erratic in their course than the cold trail of spring frosts creeping into summer, and the destructive bills of hosts of ravenous law-protected birds. These two, between them, have done their work with more than their usual effectiveness this season, and it would be almost impossible to say which have done the most mischief, or which has worked with the greater lawlessness. Both alike are sprites of destruction mounted on steeds of caprice, and the results of their combined operations are traceable in zig-zag lines throughout almost every garden in the country. Of two Apple trees standing side by side, the crop of the one is taken and that of the other left, and so of others. Hence the difficulty of giving any general report of the fruit crops of the season. Each garden would almost need to be visited separately, and a general estimate of the aggregate taken. As no one writer can be expected to do this, it is the more needful for him to furnish a few notes of the state of things in his own garden and of those around him.

One thing that reveals at once the cause of the destruction of so much fruit, and points the way to safety in later-flowering varieties, is the marvellous fertility this season of such late-flowering and late-growing fruits as Figs, Vines, Mulberries, Medlars, &c., in the open air. A fact in the opposite direction teaches the importance of the same truth. Apricots flower first of all our fruit-trees, and in general terms it may be stated that unless where protected, the crop is a failure. Under glass copings we have a good half-crop. Peaches and Nectarines flower later, and they are a fair crop. Plums on north and east walls are likewise a better crop than on south and west walls. Pears are very variable; perhaps a third of a crop, or in some cases a half-crop. Apples are a full crop in some gardens, almost an entire failure in others; about a half-crop here. Gooseberries and Currants are a fine full crop here, an entire failure in many gardens; Raspberries, a fine show, suffering from late frosts and drought.

Of Strawberries all the early blooms of many sorts were destroyed; the entire crop cut down and dug in in many gardens; in others, a first-rate crop; here a medium crop; good of Eleanor and Elton Pine on a north border. Most of the earliest varieties, such as Black Prince, are failures; Keens' Seedling also poor; President a medium crop.

Cordon Apples seem still the most fruitful. They are within eighteen inches of the ground, and were protected when in flower by a few boughs. The trees were much infested by insects in the spring, but a dose of tobacco-water killed the pest, and a heavy shower from the garden-engine in the afternoons of hot days has kept the wood of Peaches, Nectarines, &c., clean and healthy since. The roots have also been mulched and watered with manure-water, and notwithstanding the intense heat, the wall-trees are clean and healthy, and the fruits are swelling well.—D. T. Fish, *Hardwicke.*

## GARDEN LILIES.—Chapter V.

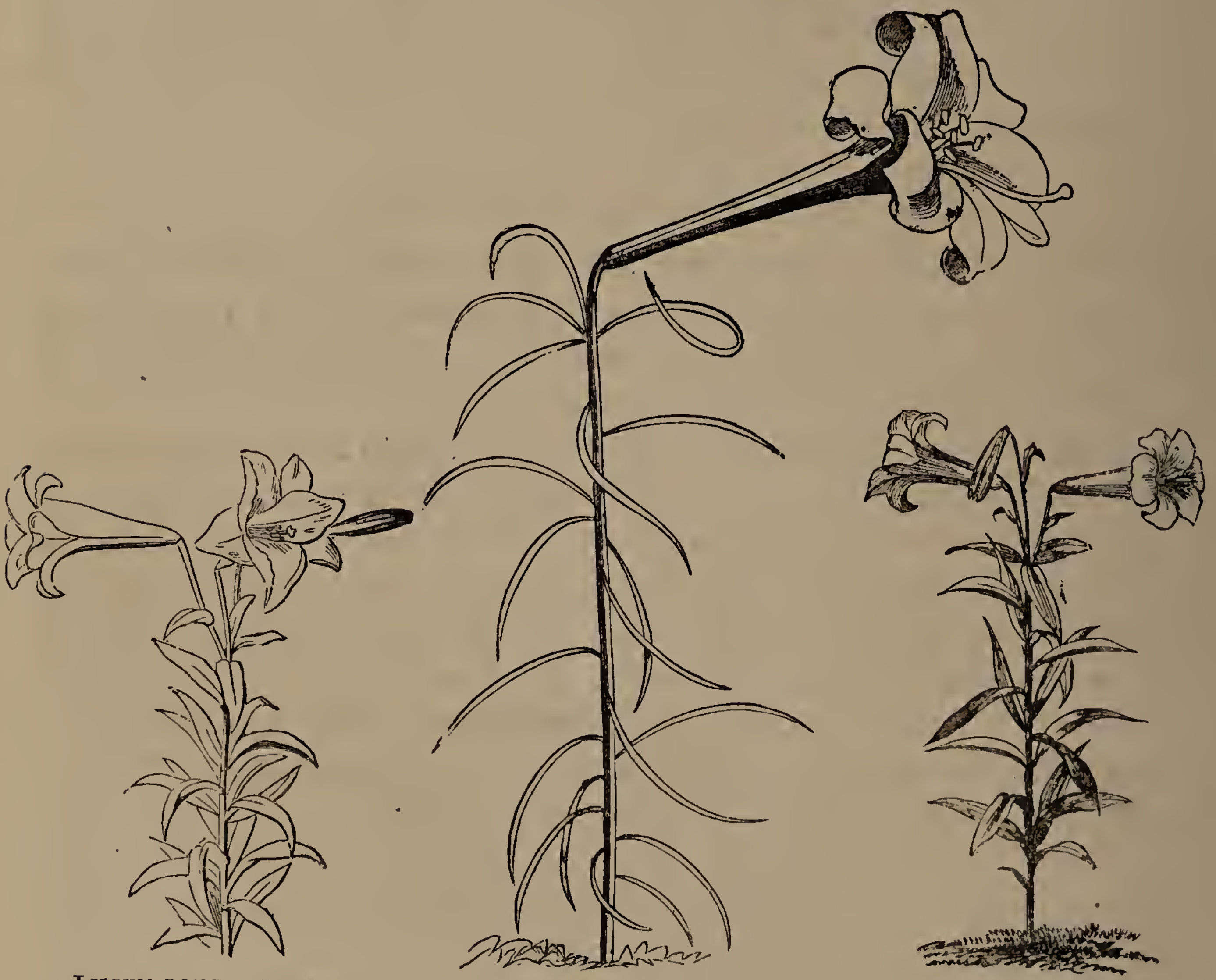
THE group of Eulirion, the consideration of which we now resume, comprises several handsome, long-tubed species, represented by the chaste-looking *L. longiflorum*, a species which, according to Mr. Baker, includes several Indian as well as Chinese and Japanese forms.

7. Lilium longiflorum (*Bot. Reg.*, t. 500; *Flore des Serres*, t. 270).—This handsome and fragrant Lily produces stiff, erect, glabrous stems, of from 1 ft. to 2 ft. high, furnished with numerous leaves (20-30 at the flowering period); the lower ones of which are crowded, erectly-spreading, linear acute, 3 in. to 5 in. long, narrowed to the base, and of a deep shining green; the upper leaves are shorter and less crowded. The flowers—of which one or two are produced on the stem—stand obliquely on the stalk, the perianth being funnel-shaped, or elongately campanulate, 5 in. to 7 in. long, pure white on both surfaces, the segments oblanceolate-spathulate, bluntish, and recurved at the tip, the claw grooved, but not hairy or papillose. The anthers are of a deep yellow. It is a native of Japan, whence it was introduced to this country in 1819, and subsequently reimported by Mr. Fortune and others.

When grown as a pot plant under glass, the height is considerably increased, a specimen grown by Mr. Wilson, and represented in the annexed woodcut from the *Journal of Horticulture*, being 3 ft. 9 in. high and 3 ft. 8 in. wide, with twenty-two flowers and two buds. Grown in this way, it forms a beautiful decorative object for a cool conservatory. It, however, grows well in the borders, but is early in its growth, and liable to suffer from frosts, unless planted under the protection of shrubs, the best positions being sheltered corners with a northern aspect.

Lilium longiflorum Wilsoni.—This is a remarkably fine variety, which has appeared in the collection of Mr. G. F. Wilson, of Weybridge. Its distinguishing features are, a stronger habit of growth, a taller stem, and much longer flower-tubes than in the typical *longiflorum.* The specimen represented in the annexed figure was a little over 3 ft. in height, and bore two flowers to each stem, but stronger examples bear as many as five flowers on a stem, and have flower-tubes measuring 8 in. long from the base to the reflexed part. It is a very beautiful Lily, having flowers rather more delicate in texture than those of *L. longiflorum* itself. It is, no doubt, of Japanese origin.

LILIUM LONGIFLORUM EXIMIUM (*Flore des Serres*, t. 283-4).—According to Mr. Baker, this is the same plant as the *Lilium Jama-juri* of Siebold and De Vriese (*Tuinbow Flora*, t. 319, t. 11.) and the *Lilium Takesima* of Duchartre, but this latter synonym is doubtful, as Duchartre distinguishes Takesima by the violet tint on the exterior surface of the bud and flower, while eximium is pure white.



LILIUM LONGIFLORUM. LILIUM PHILIPPINENSE. LILIUM LONGIFLORUM EXIMIUM.

*L. eximium* grows from 3 ft. to 4 ft. high, but is compact in habit, and has the general aspect of *L. longiflorum*, though the leaves are shorter and more nearly sessile (*Leichtlin*). The flowers are horizontal, elongately campanulate, with a narrow tube, slightly dilated above, 8 in. to 9 in. long, and a wide oblique limb, with oblong-revolute lobes, uniformly pure white. All the parts of the flower, including the style, unequal filaments and anthers, are longer than in the type, the latter, it is said, being sometimes an inch long. The plant has a strong and agreeable perfume, like that of orange-blossoms.

LILIUM LONGIFLORUM TAKESIMA (*Duchartre*).—A Japanese variety, which in habit and foliage bears a general resemblance to the type. The leaves are, however, longer and narrower than in *longiflorum*, and are usually three-nerved. The flowers are obliquely inserted, from 6 in. to 7 in. long, the lobes wide-spreading, but not revolute, and the flowers more or less tinged with violet externally. As to size and form of flower, it comes intermediate between *eximium* and *longiflorum*.

Lilium longiflorum albo-marginatum.—An interesting variety of recent introduction from Japan, agreeing with *L. longiflorum* in its general characteristics, but differing in having the leaves distinctly bordered with white.

Lilium longiflorum Wilsoni.

Lilium longiflorum.

8. Lilium neilgherrense (*Wight*, *Icon. Plant. Ind. Or.*, t. 2031·2).—This fine Indian Lily has a stoutish stem, 2 ft. to 3 ft. high, supporting numerous (20-40) erecto-patent lance-shaped, or linear-oblong leaves, the lower ones 3 in. to 5 in. long, narrowed below to a broadish base, and upwards to an acute point,

and marked on the lower side by from five to seven distinct nerves. The flowers are ascending or horizontal, from one to three in number, with a narrowly funnel-shaped perianth, 6 in. to 8 in. in length, and the limb spreading out to about 6 in. in breadth. They are very fragrant, and are said to be white, but Lemaire describes and figures them as of a honey-yellow. The anthers are long, with pollen of a deep yellow colour.

The plant was introduced to English gardens in 1862 by Messrs. Veitch and Sons, having been gathered by Mr. Lobb on the Mysore territory; and it has also been met with at Ootacamund, at an elevation of 8,000 ft. It is somewhat variable in character, as will appear from its having been represented by three several figures in Dr. Wight's work above quoted, the plant figured at t. 2033-4 under the name of *L. tubiflorum*, and that at 2035 under that of *L. Wallichianum* (not the true Wallichianum) being regarded as identical with the *L. neilgherrense* of the previous figure; to which also Mr. Baker, no doubt correctly, adds the *L. neilgherricum* of Lemaire (*Illust. Hort.*, t. 253) and the *L. Metzii* of Steudel.

9. LILIUM WALLICHIANUM (*Schultes fil.; Bot. Mag.*, t. 4561).—This species is described by Mr. Baker as "the prince of the forms of the *longiflorum* series." It grows from 4 ft. to 6 ft. high, with a stem half an inch thick at the base, and clothed with numerous (30-40) narrow linear ascending leaves, the lower ones 8 in. to 9 in. long, broadest below the middle, gradually narrowed to an acuminate point, and marked beneath with from three to five nerves. The flowers are usually solitary, sometimes two or three on a stem, ascending or horizontal; the perianth 7 in. to 9 in. long, with a long narrow tube, and spreading limb, of a delicate creamy white, the external parts of the sepaline divisions tinged with yellow and green. The anthers are an inch and a quarter long, with yellow pollen. The flowers are delightfully fragrant, and from their size and beauty they render this a most desirable species for general cultivation.

This plant is found in Nepal and Kumaon, at elevations of from 3,000 ft. to 4,000 ft. above the sea. In Nepal its vernacular name is Batisua. Like the preceding, it has been misunderstood, and Wallich published a good figure and description of it under the name of *L. longiflorum* in his *Tentamen Fl. Nepalensis* (t. 29). The figure above quoted from the *Botanical Magazine* has been copied into the *Jardin Fleuriste* (t. 105-6), and the *Flore des Serres* (t. 612). The present is the only Himalayan form of the longiflorum type, *L. neilgherrense* being confined to Southern India.

10. LILIUM PHILIPPINENSE (*Baker*, *Gard. Chron.* 1873, 1141, fig. 243).—This is the most distinct and remarkable of the narrow funnel-shaped Lilies, having flowers longer and narrower than in any other known species. It grows from 1½ ft. to 2 ft. in height, the stem being very slender, terete, and glabrous, with the numerous (30-40) leaves scattered along its whole length to within a short distance of the flower, and being nearly uniform in size; these leaves are narrow, linear, falcately spreading, and tapered to a point, 3 in. to 4 in. long, bright green, and glabrous. The flowers are pure white, solitary in the specimens

yet seen, horizontal, and with a faint and pleasant fragrance; they are 7 in. to 8 in. long, very narrowly funnel-shaped, the tubes being only $\frac{3}{8}$ in. thick at the base, the lobes oblanceolate, spreading only near the tip. The filaments are greenish-white, scarcely declinate, bearing linear-oblong anthers a quarter of an inch long, and filled with yellow pollen.

A very distinct species, from the Philippine Islands, introduced in 1873 by Messrs. Veitch and Sons, of Chelsea, by whom it has been exhibited, and to whom the award of a First-class Certificate for its production was made. We borrow our diminished figure of the plant from the *Gardeners' Chronicle*, where a full-sized representation, too large for our page, has been published. Its beauty and fragrance will ensure for it a favourable reception with the flower-loving public. —T. Moore.

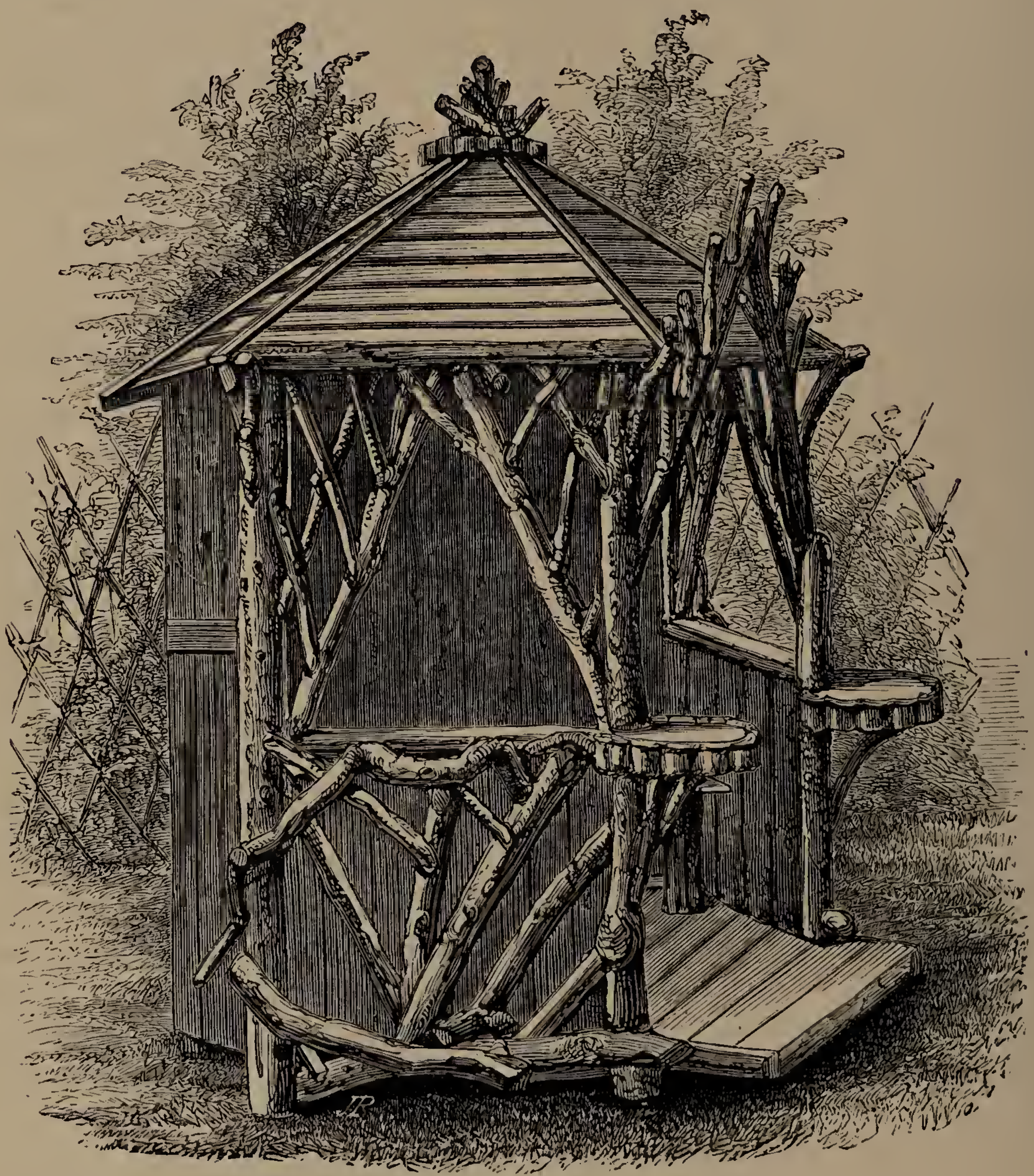
## SCHIZOPETALON WALKERI.

WHEN flowers are again loved for "sweet flowers'" sake, and the fashion for colour-displays and ribbon-borders—grown for the purpose of beating one's neighbours at the "Grange," and at the "Hall,"—has passed away, then will many of our "old loves" return, and not before. We are wearied, satiated, and overdone with the everlasting 'Christines,' 'Golden Feathers,' 'House-leeks,' 'Scarlets,' and 'Yellows,' which, common as gingerbread at a country fair, are so persistently spread before our eyes. On the other hand, what pleasure will be experienced when we may anticipate meeting some old acquaintance in every visit to a fresh garden! Some, however, may say I have gone out of the way, amidst the sheen of a sun-bound season, to throw a cold mantle upon this draper's-shop gardening. To return, then, let me commend the singular cut-petaled Schizopetalon Walkeri, as a lovely annual to all who delight in flowers for their own sake. It is not large-blossomed nor remarkably showy, the flowers being pure white internally, and of a rich brown on the outer surface, but it has the singular habit of expanding these flowers towards evening, when they diffuse a very powerful fragrance. As a native of Chili, it needs a warm site when sown in the open ground, and it may be successfully cultivated in pots.—William Earley, *Valentines.*

## RUSTIC SUMMER-HOUSES.

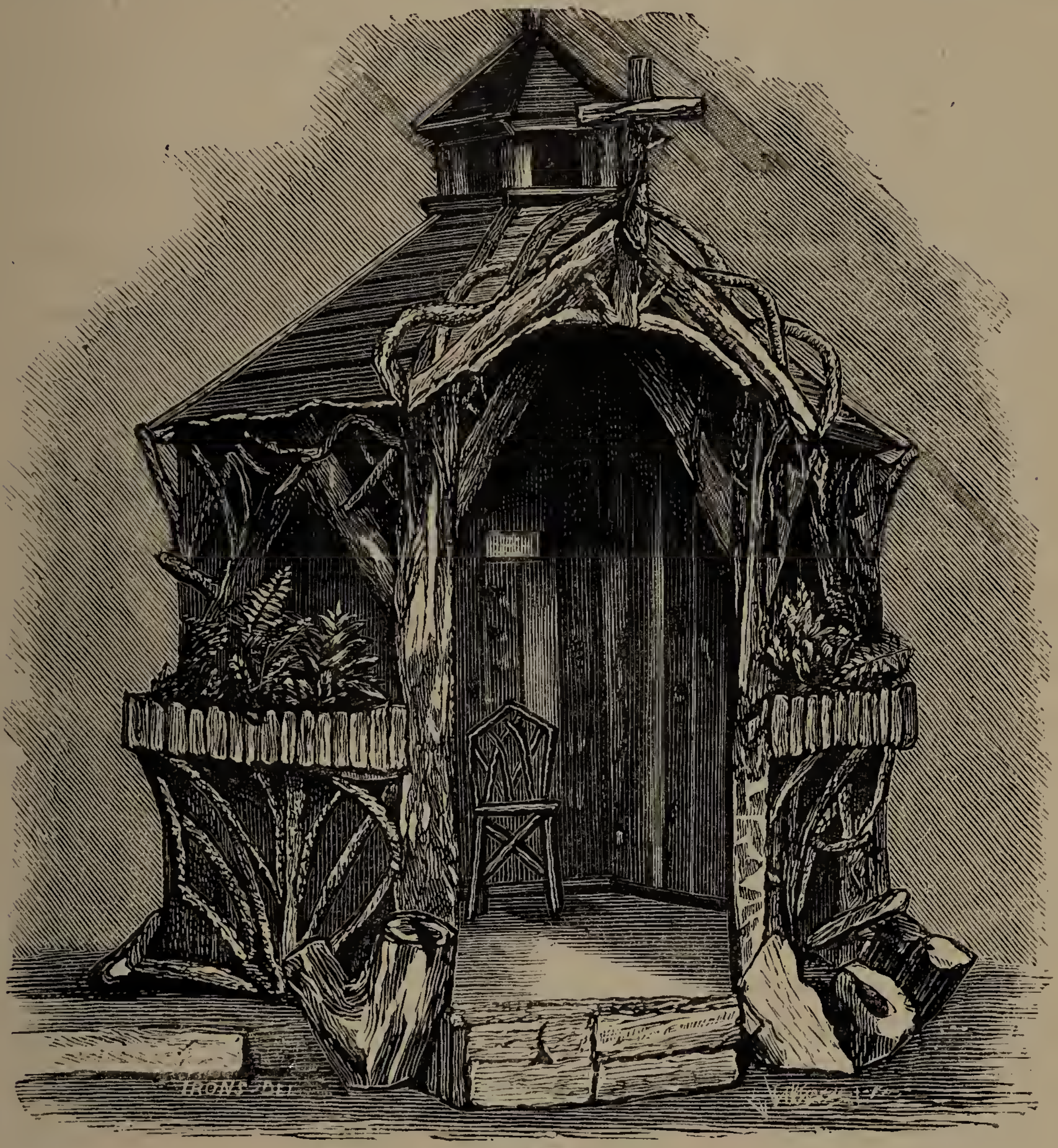
IT is at this season of the year especially, that one can fully appreciate the luxury of a Summer-house. The possibility which it affords of enjoying the free air with shelter from the sun, at a time when the dwelling-house is either too hot or too draughty to be endured, gives it a value which is most thoroughly appreciated. A Summer-house is, in fact, one of the real luxuries of a home-garden, and no apology need be offered for here introducing one or two sketches of Rustic-houses, such as might be introduced with advantage when the surroundings are appropriate.

Rustic Summer-houses are various in design and construction. Those we here figure are, in fact, wooden houses, ornamented by the tasteful introduction of contorted branches of trees, selected and fitted together so as to bring out a pattern or design. Such houses are very durable if fairly treated as to staining and varnishing, which are preferable to painting, as giving them a less artificial appearance. Such houses are, of course, cooler, if set in a shady position, but if necessarily set in an exposed place where the sun strikes on them, the roof should be double and packed with some non-conducting material, so as to avoid all possible over-heating of the interior. Summer-houses of similar character may be made with a frame-work of wood, with the walls constructed of reeds, or of moss, or of heather, the latter being a very suitable material in those parts of the country where heather abounds. The roof, instead of being formed of wood, may be thatched with reeds or heather, or even straw, though this is much less durable, and a roof of this kind is in some respects preferable, as counteracting in a greater degree the effect of sun-heat. Fir-cones are sometimes tastefully used in decorating rustic houses of this kind, and sometimes unbarked wood may be


RUSTIC SUMMER-HOUSE.

used with advantage, but as the bark is liable to decay and to harbour and attract insects, it is preferable to use wood from which the bark has been removed, either oak or fir being suitable, but the wood of the yew-tree being more durable.

We have to thank Mr. J. C. Fox, of the Royal Horticultural Gardens, South Kensington, for the accompanying illustrations. The Rustic Summer-house, constructed about 6 ft. wide, costs about £15, and other sizes in proportion. The Hexagon Summer-house is a more elaborate structure, and more expensive. Both these have wooden roofs. We shall take an early opportunity to publish a figure of a similar structure with a thatched roof.—T. Moore.



Hexagon Summer-house.

## WHO IS RIGHT?

IN my last paper I pointed out the difference of opinion formed by the Floral Committee of the Royal Horticultural Society and some of the largest growers of Pelargoniums as to the merits of the different varieties valued for their leaves. In the present I shall proceed to place side by side the opinions of the same authorities as to the value of varieties judged by their flowers :—

Surpasse Beauté du Suresnes: Discarded for bedding, *R.H.S.;* recommended for bedding, *John Fraser.*

Memnon: Discarded for bedding, *R.H.S.;* one of the best bedders, *H. Cannell.*

Commissioner: Not equal to others of similar character, *R.H.S.;* recommended for bedding, *John Fraser.*

Claude Lorraine: Not equal to others of similar character, *R.H.S.;* novel, distinct, and beautiful, *W. Paul.*

David Garrick: Not equal to others of similar character, *R.H.S.;* recommended for bedding, *John Fraser.*

Douglas Pearson: Not equal to others of similar character, *R.H.S.;* one of the best dark bedding varieties, *H. Cannell;* first-class bedder, *C. Turner.*

Mdlle. Nillson: Not equal to others of similar character, *R.H.S.;* a great acquisition for bedding, *John Fraser.*

Diana: Not equal to others of similar character, *R.H.S.;* recommended for bedding, *W. Paul.*

White Perfection: Discarded as a pot-plant, *R.H.S.;* fine for pot-culture, *John Fraser* fine shape and very free, *H. Cannell.*

George Peabody: Not equal to others of similar character, *R.H.S.;* extra, *Downie Laird, & Laing.*

Sydney Turner: Not equal to others of similar character, *R.H.S.;* a novel and distinct variety, *Downie, Laird, & Laing.*

The following are also given as not equal to others of similar character by the Floral Committee of the Royal Horticultural Society, and are offered by Messrs. E. G. Henderson and Son as of proved quality:—*Deuil de la Lorraine*, *C. Fox*, *Margaret*, *Miss Saunders*, *Mons. Charles Rouillard*, *Mr. Gladstone*, *Mrs. Goodford*, *Sir Charles Napier*, *Sir Thomas More*, *Thomas Speed*, *Troubadour*, *Velocipede.* To the last-named variety Messrs. Henderson attach the description, "Beautiful scarlet, splendid bedder, and winter bloomer."—W. Paul, *Paul's Nurseries*, *Waltham Cross.*

## GARDEN LITERATURE.

THE arrangement of our gardens and pleasure-grounds is a subject of such importance, affecting as it does so intimately their beauty and utility, that Mr. Johnson's new work on Landscape Gardening* may be welcomed for any useful hints or information which it may contain. It is divided into three books, as follows:—I., Beauty; II., Laws of Order; III., Principal Effects and Styles of Scenery; and is illustrated by several plates, showing various outlines for grouping and massing, and for water-scenery, and the habits of various ornamental trees. The first book, on Beauty, opens with the inculcation of this truth, that man's work in the production of real beauty can only be effectively compassed by strict obedience to natural laws. In countries where the surface is level, no attempt should be made to imitate mountain scenery. A level country has a beauty of its own, and this demands a character of treatment very different indeed from that which we should think it expedient to adopt in a district of rocks and hills. In regard to lines, we read: Hogarth's line of beauty has been adopted with advantage in a variety of instances. The line, however, which is best suited for beautifying land is a natural line, and this, of course, should vary according to circumstances; the lines of beauty, in fact, being always in accordance with the local circumstances and situation of the ground. To gain the most desirable results in a landscape, we must have recourse to curved lines. In roads for conveyance it is otherwise, for the lines should not be so curved as much to increase the distance, but only enough to impart a pleasing diversity of outline, and thus make the most of the land. Lines of decoration in regard of planting trees and otherwise must be boldly curved, for the more numerous the outlines in proportion to the length with which we have to deal, the more beautiful will be the results, and the greater will be the permanent satisfaction. Drives which are frequently made to run along the side of a wood may, with much advantage, be carried through it, thus creating bold and striking outlines. A road made for the convenience of a dwelling-house ought not to be carried far out of the proper curve of convenience. In regard to Colour, we are taught that we may produce an excellent effect by making use of *Rhododendrons* as a base or ground for the display of strong colours or dark-foliaged plants, aided by golden-hued, the latter being mostly employed in indicating the more prominent outlines. Where the scene is extensive, we may have recourse to more than one well-defined tint, in addition to others kept subordinate. Still, it is necessary to rely upon one leading colour, in order to assure the desired effect. Golden shades impart rich effects, but each and every line exerts an influence proper to itself. Silver, for example, brings out a sense of lightness and grace, dark shades import meditation, scarlet gives brilliancy, and grey rest; brown indicates a subdued richness; purple, a refined awe. In short, the several vegetable hues originate results of varying character, according to their arrangement. Colour in a landscape may well be compared to the eye in the animal framework, or the diamond which glitters in a lady's dress, imparting light and brilliancy to the whole.

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* *The Natural Principles of Landscape Gardening;* or, the Adornment of Land for Perpetual Beauty. By Joseph Forsyth Johnson, Curator of the Royal Botanic Garden, Belfast; and Landscape Gardener. Belfast: Printed for the Author, and sold by C. Aitchison, 12 Castle Place, Belfast.

As regards Comparison, plants should always preserve their individual character in due subordination to the general arrangement, and not be jumbled up unmeaningly together, to the ruin of all true effect. If, indeed, plants had less beauty than they actually possess, still it must wound the soul of the observer to witness the harshness and inconsequence with which they are too often treated. Contrast, when rightly used, is, in truth, the source of developing great beauty.

The second book is devoted to the Laws of Order. Here we come to deal with lines of sight, lines of distances, sites, outlines, &c. As regards the lines of sight, to impart a due sense of satisfaction in scenery, three sizes of vegetable growths will prove desirable. First come the plants which are to carpet the soil, occupying, as it were, the first line; secondly, shrubs holding a sort of intermediate position rising out of the ground-line; and thirdly, trees, imparting the greatest effects, rising above all. These lines of sight must be accommodated to the lines of distance—not the placing of subjects to be seen from some particular site, but the placing of objects so that satisfaction is felt in viewing the scene from any distance—since objects vary extremely as we approach or recede from them. The lovely outlines of leaves and flowers, for instance, are not visible from a distance; but in that case, mass and outline impress us most. As regards the character of plants, form is undoubtedly the basis of arrangement, but colour gives life to form. Colour may sometimes have prominence for its own sake, but still it should embellish and set off form. Lights and shades are also attendants on colour, and must have due consideration. The lines of vegetation vary, imparting suitable features in accordance with the period of the year. These features may be summed up under the following heads:—Outline, massing, young leafage, perfect leafage, fall of the leaf, flowers, fruit, stem, dimensions. In many trees, all these characteristics are more or less specially developed,—as, for example, in the genera *Æsculus* and *Salix.* A catalogue of plants to enumerate the above effects in detail would be most useful as a reference in all arrangements of arboreal vegetable growths.

The third book is devoted to the principal effects and styles of scenery, and sets forth in a general way a few of the practical bearings of the subject. Though here and there a little ambiguous in diction, yet it is an earnest, well-meant volume, and for the many grains of sound sense which may be gathered out of it, we have much pleasure in recommending its perusal.

The subject of Rose-culture never grows old, and Mr. Paul's Shilling Book on Roses,[*] though its text was originally printed in these pages, reads as fresh as though we had never before seen it. It is the best compendium of Rose-culture we have ever fallen in with.

Carter's Practical Gardener (sixth edition) is an elaborate calendar of garden operations, with short chapters on the most popular flowers, and numerous coloured designs, intended as suggestions for bedding-out. It is a capital shilling's-worth.

M. Rothschild sends us a little volume on Medical Plants,[†] which is brief and reliable, and is, moreover, illustrated by 117 excellent small woodcuts of the plants referred to. As a handbook or pocket-companion on the subject of medical plants, it must be very useful to students.

From the same publisher comes the Microscopic World of Waters,[‡] a well-illustrated, succinct, and trustworthy account of the animal life to be discovered in water by the aid of the microscope. There are 68 neat and well-executed woodcuts illustrative of the text.

## ROUGH PLATE-GLASS.

WHEN erecting the ranges of hothouses in the Kitchen Garden here, I had two small Conservatories glazed with rough plate-glass of the best quality, and it has answered perfectly, no shading being required for the plants in hot summers. One of these Conservatories is for growing Camellias and late-flowering Indian Azaleas, and the plants always flowered well, and the foliage is of the size and hue denoting health. The roof of this erection is likewise covered with greenhouse climbers, such as the variegated Cobæa scandens, Passion-flowers, Tecomas, Clematises, Kennedyas, and Plumbago capensis, and they all thrive well under this glass. The other Conservatory is for growing stove plants, including a good collection of dwarf Palms, some large tree and other Ferns, and a plant of Cycas revoluta which has flowered and fruited two years in succession; all these plants seem to grow well in this house, although there is a considerable drip from the rafters at times. I have

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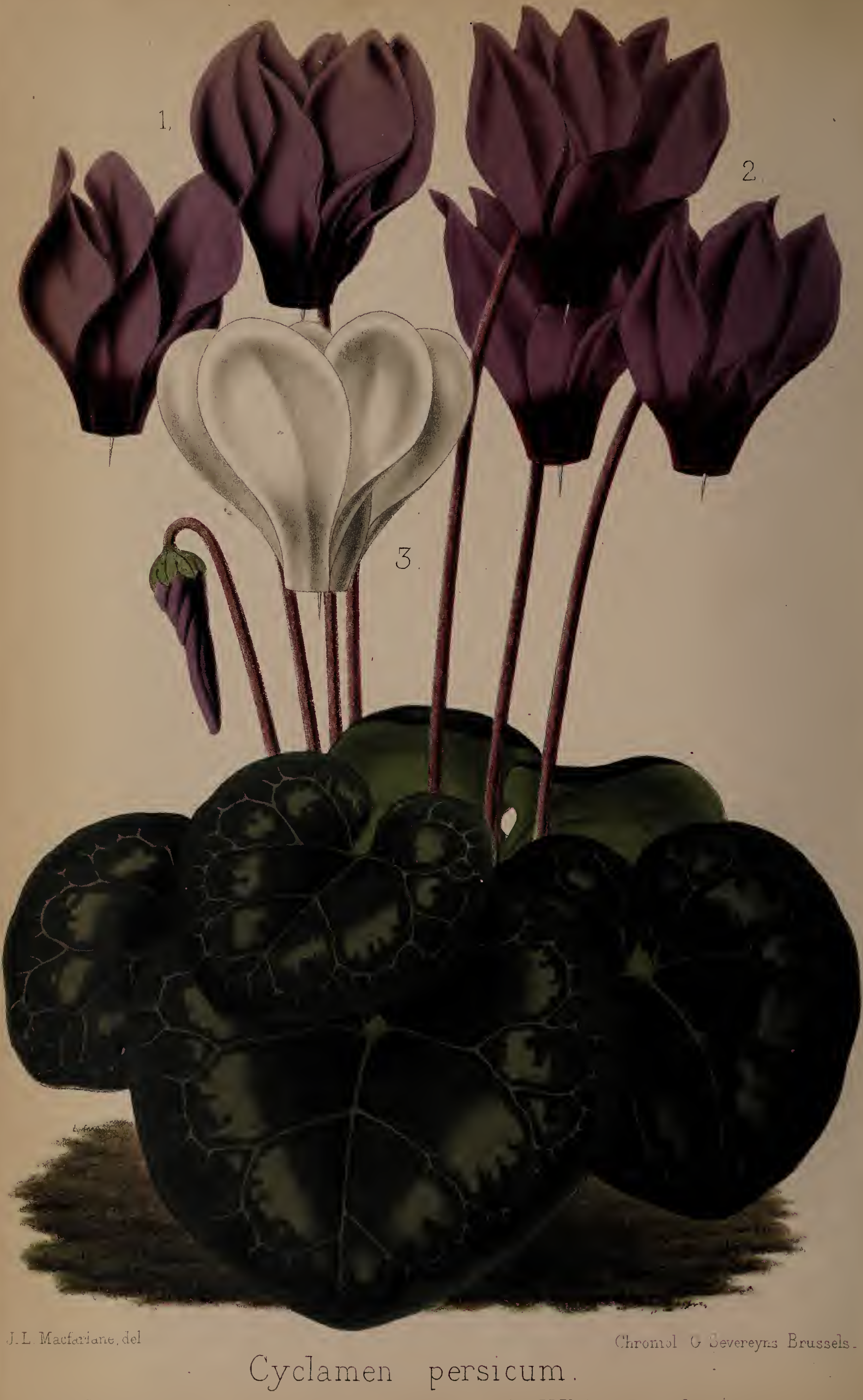
[*] *Roses and Rose-culture.* By William Paul, F.R.H.S. London: Kent and Co.

[†] *Les Plantes Médicinales et Usuelles de nos Champs, Jardins, et Forêts.* Par H. Rodin. Paris: Rothschild, 13 Rue des Saints Pères.

[‡] *Le Monde Microscopique des Eaux.* Par Jules Girard. Paris: Rothschild.



J. L. Macfarlane, del

Chromol G Severeyns Brussels.

Cyclamen persicum.

1, Royal Purple. 2, Rose Queen. 3, White Perfection.

never had any experience with rough plate-glass in forcing-houses, but should be inclined to back Mr. Temple's opinion (see p. 149), that it would be very useful in late vineries, especially where many plants of Lady Downe's Seedling are grown, for we know that that variety often gets scorched at the colouring-time unless shaded. For keeping late grapes in bottles of water in a vinery thus glazed no shading would be required in April and May, as it would be with ordinary glazing, for then the fruit shrivels if exposed to the full sun.

In very early forcing-houses glazed with rough plate-glass, I should fear that there would not be light enough in the dull winter months for the fruit to prosper well, although there would be less danger from scorching, and from hail-showers cracking the glass.—William Tillery, *Welbeck.*

## NEW VARIETIES OF PERSIAN CYCLAMEN.

### WITH AN ILLUSTRATION.

PROBABLY no flower has advanced towards perfection, both as respects form and colour, and also in regard to cultivation, more rapidly than the Persian Cyclamen, of which we now figure three of the most advanced varieties, from the superb collection of Henry Little, Esq., of Twickenham. Mr. Little has made a specialty of the Cyclamen, and cultivates it in very large numbers, and in a style which, we believe, has always ensured him the first prize wherever he has entered into competition. From early autumn, through the winter, and well on into spring, the earlier months of the year being the height of the blooming-season, Mr. Little's Cyclamen-houses are brilliant with flowers, and possibly there is no other subject which would yield so abundant and so choice a return for the very moderate amount of cultural attention required. There are, of course, some points in their treatment which it is important to observe, and perhaps Mr. Little will be good enough, at his leisure, to indicate what these are. One, we believe, of very great importance is to prevent injury to the leaves from aphides, which are very prone to prey upon them, especially while young, to the great injury of both the flowers and the plant itself.

The origin of Mr. Little's fine strain of high-coloured varieties has been already referred to at p. 90. The varieties we now figure are :—Royal Purple (fig. 1), a remarkably rich deep violet-purple, with a blood-purple base, the form all that can be desired, and the colour many shades deeper, denser, and richer than anything which has hitherto been seen ; Rose Queen (fig. 2), a carmine-crimson, with the base of the richest blood-crimson, large and fine, but not quite so perfect in shape as the former ; and White Perfection (fig. 3), pure white, of the most exquisite shape, and of large size. The two high-coloured varieties are exceedingly difficult to reproduce by art, but making due allowance for this, our figures give a correct idea of their general character, there being no exaggeration in either size or colouring, as in some figures of these flowers which have appeared —indeed, as far as regards richness of hue, the picture falls far short of the reality, as the colouring, especially of the crimson variety and its fellow-seedlings, is so intense under sunlight as to be almost dazzling. White Perfection was certificated by the Royal Horticultural Society in 1873, and Royal Purple and Rose Queen in 1874, the latter having also gained a similar award when exhibited at the Royal Botanic Society. Royal Purple, which is remarkable for its solidity of colouring, was bred between Queen of Crimsons and Purpureum, two fine varieties referred to at p. 90; and Rose Queen, which is remarkable for its brilliancy, originated from a light rose-coloured seedling crossed with Queen of Crimsons. Mr. Little keeps a pedigree of all his high-class seedlings, and the publication of the results of some of his principal crosses would be extremely interesting.—T. MOORE.

## ISOLEPIS GRACILIS [PYGMÆA].

THIS is a pretty little grass-like plant, easily grown either in a room-window or in the conservatory; and being of a most refreshing green colour all the year round, it deserves more general culture as an effective decorative plant than it at present receives from amateur gardeners. It is readily multiplied by dividing established tufts, and grows well in any moderately rich sandy soil, if supplied with water liberally. A plant has stood in my sitting-room window for the last six months, treated as a sub-aquatic, the base of the pot being set in a flat pan filled with water and constantly replenished. Grown in small pots it is valuable to the decorative florist for forming borders and margins to flower boxes and stands, its permanent character being a great advantage.—F. W. BURBIDGE.—[The proper name of this plant is *Isolepis pygmæa.*]

## FUNGI ON TREES.

WHEN fungi grow on the roots and stems of trees close to the ground, it is a sure sign the trees are decaying. If the roots of such trees were to be examined, they would doubtless be found to be affected by fungus-spawn. This, however, is not the origin or cause of the decay, which may arise from various causes, but the decayed roots and tops afford proper nutriment for the fungi, which are either attracted to them from the soil, or from spores floating in the air. In corroboration of this view, I may instance the fact of toad-stools growing on decayed flower-stakes close to the ground; these acting as conductors for the spawn to ascend to the surface, and thus complete the last stages of its growth in a similar way to that noted of toad-stools growing on the stems of trees.

If the trees are not too far gone towards decay, the best remedy is to remove the soil, to carefully cut off the decayed roots, to rub off the spawn which adheres to the healthy ones, and to cover them with fresh soil, free from rotten leaves, commonly called "leaf-mould," because all such materials are conducive to the growth of fungi. Formerly, like many others, I used "leaf-mould" when planting young fruit trees, but now I prefer fresh soil, even though rather poor, for the reason above referred to.

The fungus grows on the stems or branches of trees, and seems to be bred from spores floating in the air, and which adhere to the decayed bark, and work their spores under it among the rotten wood. All such rotten wood should be shaved off close into the quick or live wood, in order to prevent the spawn affecting a lodgment, and thus destroying the whole of the stem. I have known instances of Birch trees being so affected with fungus-spawn, that the annual rings of wood were separated by the silvery-whitish spawn, somewhat like tissue-paper. Upon such trees large fungi have been produced of the same kind as Badham recommends for razor-strops. Such are of slow growth, nay, sometimes years before they come to perfection, and are porous underneath, where are situated the receptacles of the spores or seed.—J. Wighton, *Cossey Park.*

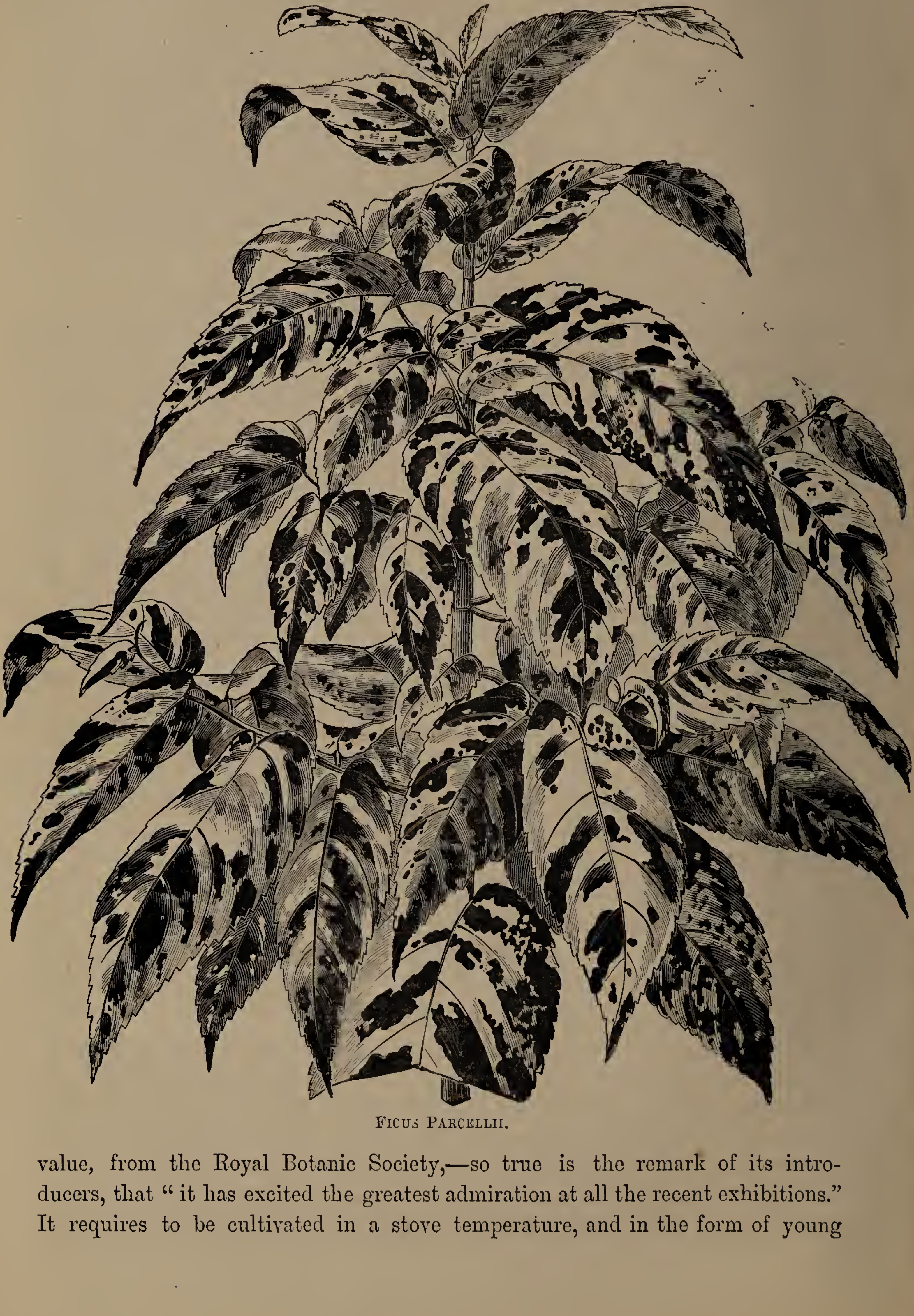
## ODONTOGLOSSUM PULCHELLUM.

THIS modest and lovely white Odontoglot has a perfume so delicate as to warrant our designating it the orchidaceous "Lily of the Valley." Doubtless, it would be far more common than it is, were it not for the very practical drawback, that a somewhat large price is required for the purchase of even a small plant of it. The very name *pulchellum* indicates its prettiness, and the rich yellow marking upon the lip materially enhances the beauty of the chaste and fragrant flower. For a wedding bouquet no more lovely or appropriate flower could be used, while for any kind of bouquet or floral decoration its charming flowers come in most usefully, and with good effect. The flowers, moreover, are very durable, which is another great recommendation, materially enhancing their value for use in the cut state. Those who do not possess the plant, and boast a collection of exotic orchids, should, where the price is no obstacle, possess themselves of it.—William Earley, *Valentines.*

## FICUS PARCELLII.

ONE of the most effective variegated plants introduced to our gardens of late years is the *Ficus Parcellii*, represented in the accompanying reduced figure, for the use of which we have to thank Messrs. Veitch and Sons, of Chelsea. The plant, which is a native of the South Sea Islands, was discovered, by Mr. Parcell, the enterprising collector to the Messrs. Baptist and Son, of Sydney, and was by them sent to Messrs. Veitch. It is of remarkably free growth, and strikingly bold and distinct in its variegation, so that it will become a most effective and useful plant for general cultivation.

The accompanying woodcut gives a general idea of the manner of growth and marking of the plant, which is of shrubby habit. The leaves are from 9 in. to 10 in. or more in length, of an oblong-obovate figure, cordate at the base. serrated on the margin, acuminate at the apex, of a thin, soft, herbaceous texture, very freely mottled and blotched with creamy-white, on a ground-colour of bright deep green. The marking is said to be very constant, and has certainly been so in all the many plants which have been exhibited freely during the past spring, and which have gained for it the award of a First-class Certificate from the Royal Horticultural Society, and of a Botanical Certificate, equivalent to the former in value, from the Royal Botanic Society,—so true is the remark of its introducers, that "it has excited the greatest admiration at all the recent exhibitions." It requires to be cultivated in a stove temperature, and in the form of young



FICUS PARCELLII.

single-stemmed plants should be a most effective subject for table decoration, as well as for the ornamentation of plant-houses.—T. MOORE.

## GARDEN GOSSIP.

THE principal Horticultural event of the past month has been the *Midland Counties' Horticultural Exhibition*, which took place at the Lower Grounds, Aston, Birmingham, on the 7th of July and following days. The weather during the whole period was glorious, and the show being exceedingly good, large numbers of visitors, both professionals and pleasure-seekers, were drawn together on each successive day. The show was got up entirely by Mr. Quiltor, at a risk of some £2,500 for prizes and expenses, the whole of which we should hope, with a handsome margin of profit, was recouped, and we believe that such was the case. It was, however, a heavy undertaking for one person, being so entirely dependent upon fine weather for success, and Mr. Quilter will probably hesitate to incur the risk another season, unless supported by a considerable fund, subscribed by the townspeople. Perhaps it is not even desirable to hold so large a show annually, as the interest is apt to flag unless the display is extended year after year, and in this way such matters are apt to grow into unmanageable dimensions. It would probably be better to have, perhaps, a couple of smaller summer or autumn shows, just large enough to keep up the general interest, and then to hold the larger show at intervals of three or five years, as may be thought best. In this way more variety would be obtainable. On the present occasion, there was a grand display of the usual foliage and flowering plants to be seen at this season, including the summer-flowering varieties of Clematis in all their splendour; a magnificent show of Roses, probably the best that had been held this year; a good exhibition of fruit, including a grand array of pine-apples, and some marvellous grapes from Eastnor; and a very excellent show of vegetables. It was really a monster show, and good in most of its departments.

—— THE following *Bedding Pansies,* from the collection grown at Chiswick, were approved by the Floral Committee of the Royal Horticultural Society, on the 15th ult., all excepting Chieftain (which received marks equal to a Second-class), receiving the equivalent of a First-class Certificate:—Dicksons' Golden Gem, bright yellow with radiating eye; Dicksons' King, lilac-purple with dark eye; Dicksons' Queen, white with dark eye; the Tory, dark purple, with rich dark eye; and Chieftain, lilac-purple, with rich dark eye, all from Messrs. Dicksons and Co., of Edinburgh. Tyrian Prince, purple self; Imperial Blue Perfection, deep bluish-lilac; Blue Bell, small bluish-lilac, but very free; Lily White Tom Thumb, white with radiating eye; Miss Maitland, white with radiating eye; and Mulberry, mulberry-purple self, all from Mr. R. Dean, Ealing.

—— TWO particularly effective beds of *Evergreen Shrubs*, amongst many others planted a couple of years ago by Mr. Standish, in the very interesting Lower Grounds, Aston Park, Birmingham—a public garden, where Mr. Quilter's most successful essay in spring gardening finds its tens of thousands of admirers—were the *Retinospora filifera* and *Retinospora leptoclada.* Like all the other Retinosporas, both these plants are perfectly hardy; the first, with its thong-like branches arching out on all sides, and the latter, with its dense little cones of the deepest green, produced two of the most charmingly effective groups we have ever seen. They are evidently capital subjects for a garden or parterre of evergreens, and in situations where they will thrive as well as they do in this suburb of Birmingham are much to be recommended.

—— THE Red Valerian, *Centranthus ruber*, is at this season an object of great beauty along the chalk cuttings of the North Kent Railway, near Greenhithe and Northfleet. The growth is very dense, and the patches of colour remarkably striking, the old rosy-red form having mingled with it a bright crimson variety, much darker in hue than is generally seen in gardens, and well worthy of being cultivated as a border plant.

—— THE so-called *Double-flowered Poinsettia* may shortly be expected to be seen in this country. The dried specimens show this to be a very splendid addition to our stoves. The term "double" as applied to flowers has in garden parlance a very wide meaning, and includes all sorts of conditions of very different nature. In the case of this Poinsettia, the doubleness consists in a repeated branching or subdivision of the top of the flower-stalk, and a corresponding multiplication of the coloured leaves or bracts on which the beauty of the plant depends.

—— AT a recent meeting of the Scientific Committee of the Royal Horticultural Society, Dr. Gilbert entered into some explanations as to the growth of *Fairy Rings*, as observed by Mr. Lawes and himself at Rothamsted. Mr. Lawes had obained analyses of samples of the soil from the ring itself, from the space within the ring, and from the earth outside it, with the general result that the quantity of nitrogen in the soil outside the ring was greater than in the soil beneath the ring itself, while in the centre within the ring the amount of nitrogen was least. Under the green ring a quantity of mycelium was found.

—— THE Royal Horticultural Society's Fruit Committee, at a meeting held at Chiswick on the 10th ult., awarded to Messrs. Vilmorin et Cie., Paris, a First-class Certificate for *Seville Long-pod Bean*, a variety which produces pods 8 in. to 10 in. long, of great size, and coming in four or five days before the earliest of the Broad Beans. Messrs. Carter and Co., High Holborn, also received a First-class Certificate for *Carter's Mammoth Long-pod*, which proved a superior selection of the best old long-pod kinds.

—— LADIES will find the *Patent Siphonic Watering-Pot*, invented by Messrs. A. Smith and Co., of Bath, a very clean and useful implement for watering the plants in their greenhouses. The special advantage claimed over the older kinds is that the principle of the siphon is applied in such a manner that it can be used underhand, or elevated overhead by means of a handle. Gardeners, having their customary daily work to get through, can scarcely be expected to appreciate these refinements, but ladies who take a personal interest in plant-culture, and delight in watering their plants for themselves, will find the contrivance a very handy one for the purpose, irrespective of the advantage it offers of avoiding the necessity for mounting steps. The special advantages claimed for it are:—A steady and uniform flow of water, which may be regulated at pleasure; its adaptability for watering plants on the upper shelves of a greenhouse, as the pot can be used without being tilted or inclined, at a higher elevation than can conveniently be reached by anyone using an ordinary watering-pot; and its adaptability to be used underhand, by simply pressing a spring above the handle.

—— MESSRS. STANDISH and Co., of Ascot, who have raised a very promising batch of *New Peas*, have just adopted the name of *The Criterion*, for that which has been set apart as the best of the series. It is in every way an excellent Pea. Being one of the wrinkled marrows, it has a fine, sweet flavour. In ordinary seasons it grows about 3 ft. in height. It is in use a fortnight earlier than Ne Plus Ultra, and is a good bearer, with fine well-filled pods, resembling those of Laxton's Supreme, and having thick fleshy husks. When cooked it is of a fine grass-green colour; and being of a delicate texture, it will, it is said, keep longer in use than any other Pea, partaking in this and in other respects of the character of Ne Plus Ultra, which was one of its parents. We look upon the Criterion as one of the most valuable of the New Peas.

—— THE *Libocedrus decurrens*, as is well known, has erroneously borne in our gardens the name of Thuja gigantea, the true T. gigantea being called T. Lobbii, an error which appears to have originated with French writers on Coniferæ. The complicated synonymy of the two plants is as follows:—*Libocedrus decurrens* (Torrey), otherwise Thuja Craigana (Murray), T. gigantea (Carrière, Gordon, and others), not of Nuttall. *Thuja gigantea*, Nuttall, otherwise T. Menziesii (Douglas, Gordon, and others), T. Lobbii (gardens), Thujopsis Standishii (Gordon), and T. japonica (Maximowicz), not of our gardens, which is a form of Biota orientalis. Professor Koch now tells us that Libocedrus decurrens cannot be retained in the genus, because it differs from the other species of Libocedrus in having an erect strobile consisting of six scales, whereof the two inner are grown together, forming a central column, the two intermediate larger, with one or two winged seeds at the base of each, and the two outer much smaller. In the other species of Libocedrus the two central consolidated scales are wanting, or very much reduced. On these and other grounds, he erects it into a separate genus, and names it *Heyderia decurrens*, in honour of a German horticulturist. Koch also considers the habit and the characters afforded by the leaves to be of importance. We doubt, says the *Gardeners' Chronicle*, whether this change will meet with general acceptance, the distinctive characters of the new genus being too slender, though we are bound to say that it is perhaps as distinct as some other genera of this family, commonly recognised as such. The peltate stamens are said by Koch to be three-celled, but they are usually four-celled, as in most of the Cupressineæ.

—— IN Smeaton and Co.'s combined *Heating and Fire-Extinguishing Apparatus*, which has recently been patented, the apparatus intended for heating purposes seems to be very usefully turned to account in other ways. Thus, by means of certain combinations, supplies of hot and cold water can be brought into operation simultaneously, and rendered available for the extinction of fire, a larger quantity of water being thus obtained, and with greater certainty in case of sudden emergency, than by any of the arrangements hitherto in use. This is effected by means of hot and cold water reservoirs, and a properly regulated system of main-pipes, valves, and hydrants. In some cases, such chemical substances as are capable when brought into a gaseous or vapourised state of extinguishing fire may be placed in the hot-water reservoir, and thus most usefully employed; but even when such substances are not so employed, the steam and vapour resulting from the use of heated water materially assist in the effectual working of the apparatus, which is applicable to every description of building, and can be readily added and adapted to apparatus already erected for the supply of hot and cold water.

—— IN the *Anthurium Scherzerianum Williamsii* we have a fine companion plant to the bright scarlet-spathed type, which is now so well-known and so highly appreciated. When first introduced, this plant, as to size and colour, was very inferior to what it has subsequently become, under the fostering care of our cultivators. The white-bracted variety which was shown at a recent meeting of the Royal Horticultural Society, Mr. Williams, of Holloway, is perfectly distinct, and though not equalling in size what the scarlet bracted form has become, it was sufficiently developed to show what a fine plant it will become. The leaf and habit are quite the same, but the spathe is pure white, and the spadix clear yellow. The same plant appears to be grown in some establishments as *A. Scherzerianum album.*

—— FEW private gardeners, probably, have heard of *Edmund's Surprise Broccoli*, though it seems to be exceedingly popular for market purposes, as it is undoubtedly one of the finest and most compact kinds in cultivation. It appears to possess all the peculiar protecting qualities of the old Knight's Protecting, as the head, even after it has attained a great size, is still covered with leaves, whilst when as big as the mouth of a bucket it is still solid and firm, and as white as can be desired. The true stock of this variety is, no doubt, in the hands of a limited circle of growers. One grower from the district of the Medway in Kent is reported to have sent about 1,000 dozens of heads into the London markets on each week-day for nearly four weeks, and but for the extremely forcing weather of April the cutting would have lasted for a longer period.

—— THE *French System of Keeping Grapes* in bottles of water after being cut from the Vine, instead of allowing them to hang through the winter, has now become quite popular; but an improvement has been adopted by Mr. Wildsmith, of Heckfield, which consists in leaving the entire length of wood beyond the bunch, instead of cutting it off just above, when cutting the Grapes for bottling. The advantages which result are that the stalks of the bunch are kept green and firm for a much longer period, and the berries remain plumper. The water absorbed by the wood, instead of being carried into the fruit, to the detriment of its flavour, is diverted into the branch beyond, and, as there is no fresh-made cut in the wood, there is not the slightest amount of bleeding.

—— UNDER the name of the *British Pteridological Society*, a number of amateurs, who are Fern-fanciers, have agreed to found a society whose principal object will be to secure a "more correct classification and nomenclature of British

Ferns," and indirectly to discourage, or prevent as far as possible, the destruction of rare species or varieties in their wild habitats.

—— THE little *Dianthus glacialis* is a gem amongst Alpine plants. It forms complete hillocks, composed of the brightest rose-coloured flowers, 1 to 1¼ in. across, and the whole plant is not more than 2 to 3 in. high. The flowers are produced in such abundance, that as many as twelve to fifteen may be counted on plants not more than 1 in. in diameter. It flowers earlier than most other Pinks, and is easily distinguished from *D. alpinus* and *D. neglectus* by its more cæspitose and compact habit, not forming running shoots under the surface of the soil, as those two species do. The foliage is of a much darker green, and blunter than that of *D. neglectus.* The plant is of very easy culture, thriving well in rich garden loam, planted on any well-drained spot either on the rock garden or ordinary flower border.

—— PROFESSOR KOCH mentions in the *Gardener's Chronicle* a handsome *Variegated Lime*, which he met with in the collection of M. Rosenthal, of Vienna. This Lime, according to the statement of the owner, belongs to *Tilia platyphyllos,* but Professor Koch doubts this, and believes rather that it is a variegated form of an American species, probably of *Tilia pubescens.* The leaves, instead of being clothed with soft hairs, as is the case in the large-leaved Lime, are furnished with scattered bristly hairs. We already possess a variegated variety of T. platyphyllos, but it cannot be compared with Rosenthal's for beauty. The variegation of this new variety is of an orange tint, occupying the greater portion of the surface of the leaf.

—— ANOTHER variegated plant which attracted Professor Koch's attention in M. Rosenthal's nursery was a tricoloured *Variegated Sweet Cherry* (*Prunus Avium*). The rather large leaves were speckled and spotted with white, yellow, and red, resembling, in some respects, the variegated form of *Prunus Padus,* found in gardens under the name *Padus aucubæfolia. Cerasus Avium pulverulenta tricolor* is the name given by Rosenthal to his variety.

—— THE showy, orange-coloured, Gazania-like *Mutisia decurrens* is found to be hardy at Floors Castle, growing on a south-west wall, where it has flowered every season for the last four years. Mr. Knight recommends that this handsome evergreen climber should be planted more freely, especially where conservative walls have to be furnished. Mr. Coleman, of Eastnor, advises to plant it in the open ground. Some years ago he procured a plant which was trained against a south wall, but finding the situation too hot and dry, he removed it to an open space in the grounds, where it grew vigorously, flowered profusely, and ripened seeds from which young plants were raised. Against a wall, with him, the old leaves and stems assume a rusty appearance; but planted out in the open, in a compost of peat and loam on a cool bottom, where it can ramble over rootwork or an old bush, it forms a striking object. It is impatient of close training, and well repays being left alone. A good figure of it will be found in our volume for 1862.

—— THE *Galvanised Wire Netting*, now in vogue, is an article that finds many a ready use about gardens and country-houses. We understand that at the late Bremen International Exhibition, Messrs. J. B. Brown and Co., of London, were awarded a medal of merit for their exhibit of this article, the award being made for cheapness and excellence of workmanship.

## Obituary.

—— MR. ROBERT GODFREY, of Homelands, Ryde, died from the effect of sunstroke, on the 20th ult., aged 62 years. He was a nephew of the Waterers, founders of the Knap Hill and Bagshot Nurseries, and after the death of his uncle, Mr. Hosea Waterer, carried on and extended the Knap Hill business, in conjunction with Mr. Antony Waterer, under the style of "Waterer and Godfrey." On account of failing health, he some years since retired, and went to reside in the Isle of Wight, where his health became re-established. He was one of our best nurserymen, and a kind, warm-hearted man, whose loss will be deeply regretted by a wide circle of friends.

# GARDEN WORK FOR AUGUST.

## FLOWERS.

THE continued dryness of the weather, with the sudden fluctations of temperature during June, has considerably retarded the growth in our flower-gardens, yet with from 3° to 4° of frost in the middle of the month, when most tender plants were planted out, it is surprising that the actual damage is so slight. The only plant that we have had to replace was *Coleus Verschaffeltii splendens,* in a low-lying pannel; this splendid variety is somewhat tender, while *Alternantheras* were but very slightly seared, *A. amœna* sustaining no apparent injury.

The watering both of the flower-beds and of the grass-lawns has now become so important a matter, that every opportunity of an obscured sun should be taken advantage of to apply water, or else the sun should be allowed to decline before using it, as water should never be applied during bright sunshine, particularly over the foliage. The turf must be kept fresh, if possible, as a verdant sward is one of the greatest charms of the flower-garden. The training of all plants in patterns and lines must be carried out with exactitude, for without trimness and order are maintained perfect satisfaction is not to be had. *Shrubberies* should be seen to, and the growth regulated so that the more delicate subjects do not get overcrowded or overgrown.

After the middle of the month, a sowing of annuals for spring blooming, such as *Alyssum calycinum, Collinsia bicolor*, and *C. verna*, *Lasthenia californica*, *Limnanthes Douglasii*, *Saponaria*, &c., should be made. Finish the layering of *Carnations*, and transplant or pot when sufficiently rooted. Plant out early-rooted *Pinks* into prepared beds. Continue to propagate perennial and biennial plants; transplant seedlings of *Wallflower*, *Myosotis*, &c.

*Roses:* Frequently look over stocks that are budded, to remove suckers, and loosen the tying material when necessary. Cuttings of Tea-scented, China, and in fact, all sorts of roses, will now root freely, if slipped off with a heel—*i.e.*, with a small portion of the old wood attached, and inserted firmly in pots, or placed in beds of soil in cold frames. I find Roses most serviceable for cutting from when grown upon their own roots, the perpetuals producing a lengthened succession of famous buds. Give every encouragement in the way of applications of manure-water to the autumn-blooming varieties.

*Conservatory:* The supply of flowering plants in these structures for the next month or two will be somewhat limited, but the deficiency may be compensated for by a liberal admixture of foliage plants. *Crotons*, *Dracœnas, Coleus*, and many other plants remarkable for their coloured foliage, will stand for months in such a structure at this season. Pay every attention to *Fuchsias*, as to watering and encouraging such as are placed out-of-doors with manure-water.

*Lantanas* are useful blooming plants for this time of the year, as are also the *Plumbago capensis* and *P. rosea*, which, when freely cultivated, produce a profusion of their charming blossoms. *Globe Amaranths*, *Celosias*, &c., are very effective greenhouse annuals. *Chrysanthemums* will now require attention in training, as all will have had their final shift, and must have an efficient supply of water at the root, damping the foliage with the syringe morning and evening; they are gross feeders, and must have a supply in accordance. *Cinerarias* for early blooming will now be in their flowering-pots, and should be encouraged with manure-water, keeping them in a situation shaded from the direct action of the sun, with free exposure. *Primulas* must be shifted on as necessary. The double varieties should now be divided, and propagated in a gentle heat, in small pots, using a healthy compost of equal parts of loam, peat, and leaf-soil, with a free admixture of silver-sand. Shift on the smallest-sized plants for specimens, using the compost in a rougher state. The double varieties are not grown nearly so much as they deserve to be, as they are so free in flowering, and far superior to the single ones for cutting from.

*Stove:* Attend to the training of climbing plants, more particularly upon the roof, as they soon become a confused mass, and if not kept under subordination, they obscure the light, and retard the ripening of the growth upon plants underneath, which should now have more exposure, with more air, and less water at the root, in order to thoroughly mature their growth. This ripening process should also be assisted by setting the plants thinly, and elevating them near to the glass. As a general rule, flowering plants in stoves are over-shaded, and in consequence their blooming qualities are impaired. *Poinsettias* that are placed in their blooming pots should be fully exposed to the atmosphere, so as to ensure a sturdy habit of growth, so desirable in these effective plants ; keep successional plants freely stopped back, and guard against drawing. *Euphorbias*, and such plants as are being got forward for winter blooming, must have attention.

*Greenhouse:* The hardiest portion of hard-wooded plants that have made some growth will be now benefited by being placed out-of-doors, choosing a situation which is slightly shaded from the mid-day sun—for example, under a north wall, or in the shade of a hedge, or of trees where they are not over-hung. The pots must stand upon a bed of ashes or on slates, so that they may be secure against worms. They will require attention in watering, and lightly syringing overhead in the evenings of bright days.

Plants of *Laburnum*, *Thorn*, *Lilac*, &c., that are grown in pots, and plunged in soil, should be frequently twisted round, so as to prevent their rooting through, which will check grossness of growth, and promote thorough maturation.

*Camellias:* Now is the best time to graft, and propagate the single red for stocks. Care in watering is necessary at this period of development, more particularly with such as are planted-out, as the strong-growing varieties, such as Marchioness of Exeter, when too freely supplied with moisture, are apt to make secondary growth in place of flower-buds. Less water at the root and atmospherically, with a free circulation of air, will be conducive to bud-formation.

*Ferns:* In most establishments, quantities of small plants are in demand during the winter months for the various purposes of embellishment, and these should now have attention, potting on a quantity of seedlings in small pots, and if necessary, dividing Adiantums, &c., for this purpose ; these, if shaded and encouraged for a few weeks, soon make famous plants. *Lycopods* are also very serviceable for this purpose.

*Pelargoniums:* Cut down the show varieties, keeping them dry until they show signs of breaking. Plants that were cut down early, and have broken sufficiently strong, should be shaken out of the soil, the roots being reduced, and the plants repotted into sizes according to their strength ; start them in a frame or pit, and shade during the day, paying strict attention to watering until they are fairly started. The fancy varieties require a lighter soil than the show sorts.—GEORGE WESTLAND, *Witley Court.*

## FRUITS.

*Vines:* Keep the houses containing ripe Grapes well aired and free from moisture ; and as soon as the crop is cleared, the sashes may be removed, if the wood is properly matured. Vines in pots should be watered often with liquid manure, and those intended for forcing next season should be stopped as soon as they are of the desired length ; cut out all lateral shoots close to the fruiting bud as the wood ripens. Keep a moist growing heat in the late houses, and economise sun-heat by closing early in the afternoon. Should the weather set in dull and chilly, a little fire-heat should be applied to late Muscats. If mildew makes its appearance on any of the Vines, dust the fruit and leaves all over with sulphur, and keep the house a little warmer for a few days. It can readily be washed off again with the syringe after the mildew has disappeared.

*Pines:* All plants intended for fruiting next summer should be shifted this month, as well as the young stock; use free turfy loam, with a mixture of sheep or pig-manure. Those planted out on ridges will now require plenty of water, and growth should be encouraged by keeping up a moist atmosphere; close early in the afternoon, at a temperature of 90°. Give liquid manure occasionally, and use the syringe to all, except where the fruit is ripening.

*Peaches and Nectarines:* Syringe the trees daily, and give a liberal supply of water at the root in the latest house. Continue this up to the time the fruit is approaching maturity, with abundance of air through the day, also a little at other times, if the nights are warm. When other houses are clear of the crop, go over the trees as before advised, wash the trees with the engine, water the borders, and remove the lights if the wood is ripe and growth finished.

*Figs:* Plenty of air and moisture is all that the second crop of Figs under glass will require at present.

*Melons:* These will need plenty of air and water; indeed, if the weather is hot, the lights may be drawn off altogether, closing the frames again at night. Continue to cut away useless growth, so that the plants do not get matted together. Withhold water where the fruit is ripening. If wood-lice are troublesome in the frames, it is a good plan to set the fruit on pieces of brick, placed in a shallow pan of water.

*Strawberries:* Continue to layer in small pots for forcing, and as soon as any are well rooted, pot them at once; stand the pots on ashes or a dusting of lime to prevent worms entering. Attend well to the watering in dry weather. Choose a fully exposed situation for growing the plants. A few *Black Prince* may be useful for the earliest forcing, but *La Grosse Sucrée*, *Keens' Seedling*, and *Vicomtesse Hericart de Thury* are among the best varieties for *early work*, for although not so early as the Prince by a week, the fruit is superior in all ways.

*Hardy Fruit:* It is now time the thinning, stopping, and nailing-in of the young shoots of all wall-trees was finished. *Peaches* and *Nectarines* in particular should not be neglected; they should now be kept closely nailed-in, to get the wood ripened, and to give the fruit every advantage of air and light. Remove a portion of the leaves from the fruit where it is too much shaded, and at the same time see that none of the nails come in contact with the fruit. Water the borders in dry weather, and use the engine or syringe to sprinkle the trees on the evenings of hot days up to the time the fruit is ripening. Trap earwigs on their first appearance; perhaps the simplest way to rid the trees of them is to place short pieces of bean-stalk, or other hollow tubes, in different parts of the tree, and to look them over every other day, and blow the contents into a bottle, placing the tubes as before. Secure all ripe fruit with nets, &c., and mat up *Currants* and *Gooseberries* for late use.

As soon as the crop of *Strawberries* is gathered, cut away all runners that are not wanted for layering. Stir the surface of the soil, and give the plants a soaking of liquid manure, to encourage them before the growing season is past. Layer runners for new plantations; plant them as soon as they are rooted in well-prepared soil; if planted out at once, a good crop of fruit may be expected from them next season.—J. POWELL, *Frogmore.*

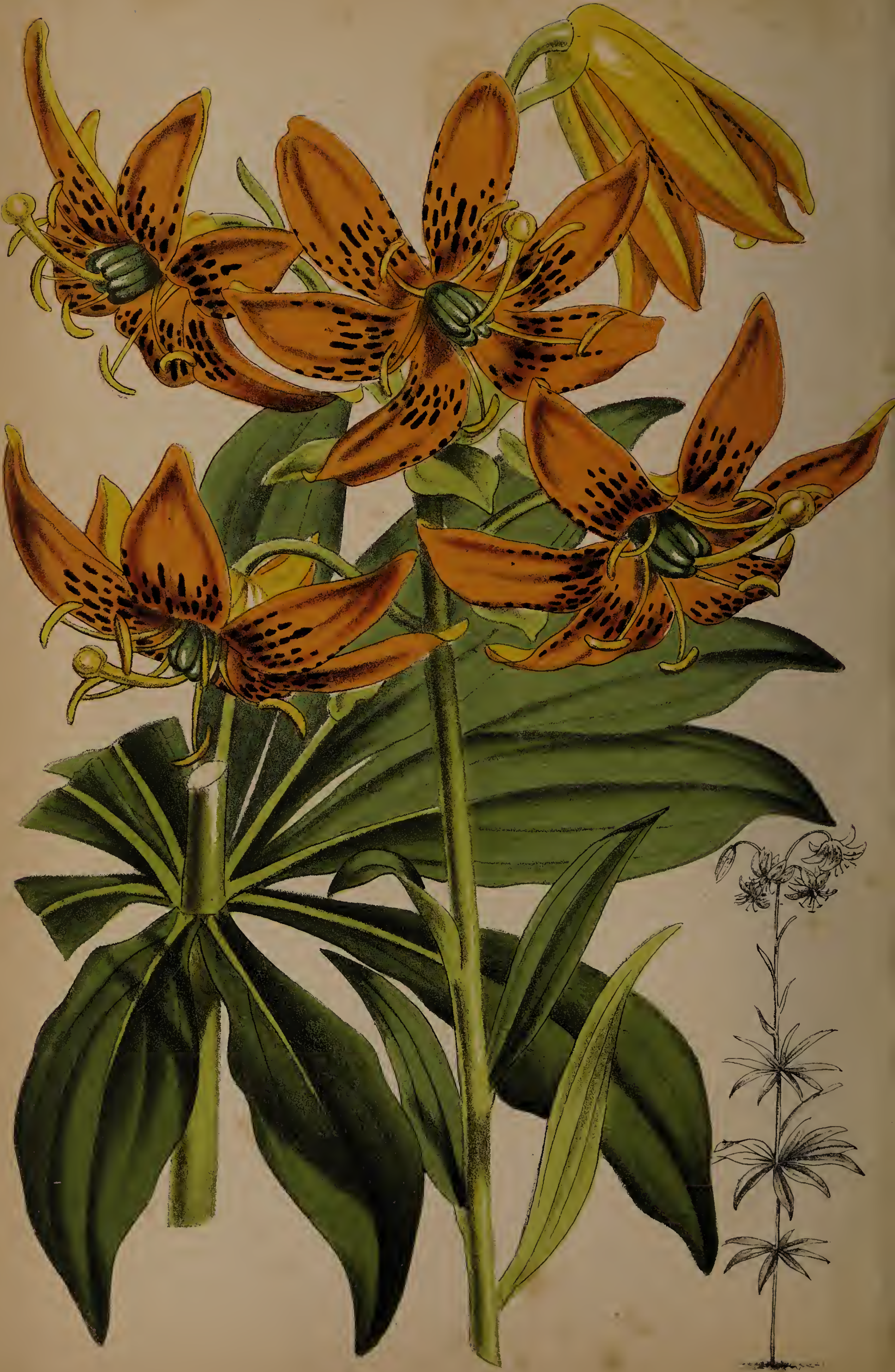
## VEGETABLES.

The chief consideration in this department will now be to encourage by every possible means the growth of the many crops under cultivation; and should the weather continue as dry as we anticipate it may do, this will prove no small tax. Artificial waterings will be in request constantly, and in instances where the water is laid on at a high pressure, and a hose is provided, as it is in some establishments, this will prove no great trouble. Where water is not so ready to hand, this operation involves much heavy labour. Artificial waterings should always be given with a method. Whenever water is given to any garden crop, owing to the natural drought, let it always be a most thorough root-soaking. To damp plants overhead, wetting an inch or two of the ground-surface only, is, to say the least, a false aid, and I may add, an injury. Do well whatever is done.

Push on with the necessary transplanting of *Celery*, choosing, if possible, a showery day in which to do this; or in the absence of the shower, always transplant at as late an hour in the day as possible, well soaking the soil around at night, and giving another moderate watering in the early morning. *Cauliflowers* will need, perhaps, more direct and constant artificial waterings than any other crop, because if they are not attended to in this wise, they quickly 'button,' or run to flower, whilst in a very young state, and before they get at all useful. Ground must now be prepared for winter crops of *Spinach*, *Onions, Lettuces*, *Cabbage, Endive*, &c.; prepare all alike, well trenching that for the former, where practicable, and taking advantage of a damp period upon which to make a sowing of each, to insure as early a supply as possible. Make a special sowing of *Spinach* (Prickly) as near to August 11 as possible; this for the mid-winter and very early spring crop. Sow *Chervil* (Turnip-rooted), insuring the seeds being always new, or of the current season's growth. Make also further small sowings of the kinds of *Saladings* mentioned above about the 23rd of the month; also of *Cabbages*, the seedling plants from which may remain in the seed-beds during the winter, to insure a successional spring supply, and perhaps, to fill up gaps in the earlier and more permanent beds or plantations. Make another sowing of *Carrots* (Short Horn) about the second week in the month, for early spring drawing. Mould up *Brussels Sprouts*, *Broccoli*, and all winter green crops, and proceed with the earthing-up of the first *Celery* rows.

Procure the customary materials for *Mushroom-beds,* keeping them dry until a sufficient quantity has been got together, and then making up the beds forthwith. It is not necessary to have so much heat in the materials at this early date, and the beds may, therefore, be spawned more quickly, always bearing in mind that spawn works or runs more readily in moderately dry materials.

As the season advances, give fresh and increasing bottom-heat to *Cucumbers* and *Melons,* affording air nightly, and as the heat becomes felt, the more liberally. Cut over, or thin-out, all the older vines of those Cucumber-plants which have become somewhat exhausted by bearing, removing therewith also many of the older leaves, and with the room gained encouraging the younger shoots, and particularly the young leaves, to occupy and fill up the spaces. Encourage, in fact, a growing period, independently of any thought of fruit for a week or two, and the supply will be forthcoming more abundantly in consequence for some time afterwards. A thorough good soaking should be given to the bed just at the "nick" of time, at which the renewed bottom-heat is likely to make itself felt. Encourage young *Cucumber*-plants to form sturdy growth for the early autumn planting in houses intended for the midwinter and very early spring supply of fruit. Give all *Cucumber-houses* a thorough cleansing, whitewashing, &c., forthwith.—WILLIAM EARLEY, *Valentines.*



# LILIUM AVENACEUM.

WITH AN ILLUSTRATION.

THIS remarkably distinct Lily was shown at a recent meeting of the Royal Horticultural Society, by G. F. Wilson, Esq., of Weybridge, who kindly supplied the specimens from which our drawing was made. In his recent notes on Garden Lilies, Mr. Baker regarded this plant as synonymous with *L. maculatum*, and the same opinion was expressed at the meeting at which the plant was shown, by Dr. Hooker; hence our plate has been lettered *Lilium maculatum*. M. Leichtlin, however, who is an authority on all that concerns the genus to which this plant belongs, considers the name of *L. maculatum* as being synonymous with *L. medeoloides,* a figure of Thunberg's published in the Memoirs of the Academy of St. Petersburg being the authority for this opinion; this figure is looked on by Mr. Baker as in some degree supporting M. Leichtlin's opinion, without, however, fully proving it. Hence he has, in his notes on Liliums, published in the Linnean Society's *Journal*, adopted for the present plant the name we have placed at the head of this article. Thunberg's description of a bell-shaped perianth certainly by no means agrees with the present species.

The plant from which our figure was taken was about 2 ft. high, with distant whorls of lanceolate leaves an inch wide on the lower part of the stem, near the top of which the leaves became alternate, a rather loose corymbose umbel of 5-6 flowers crowning the whole. The flowers, as will be seen from the figure, are very distinct in form, having scarcely any tube, so that the perianth segments spread out immediately above the base; they are elliptic-lanceolate, nearly an inch and a half long, so that the blossoms are fully 3 in. across; and they are of a deep tawny-orange colour, with a thickish cluster of black spots towards the base. The flowers are somewhat nodding, but the style makes an angle with the top of the ovary, so as to assume an upward direction. The ovary itself is very deeply six-winged. This Lily is perfectly hardy, being a native of Kamtschatka, Mandchuria, the Kurile Islands, and Japan. It was exhibited in flower about the middle of June.—T. Moore.

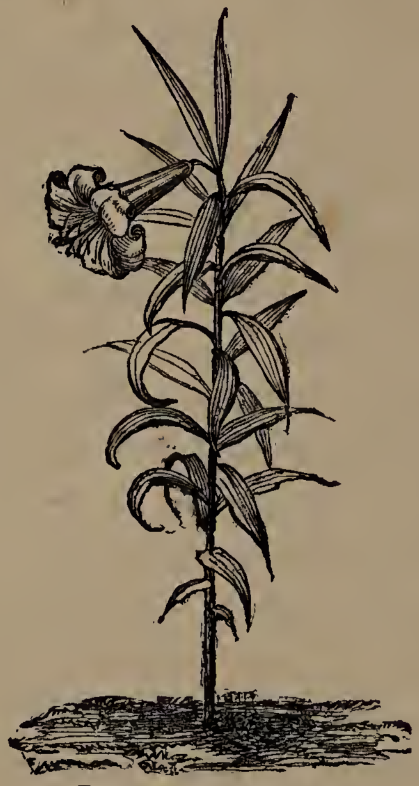
# GARDEN LILIES.—Chapter VI.

THERE still remain some species of the Eulirion group which we have not yet considered, and to some of which we now invite attention.

11. Lilium japonicum (*Bot. Mag.*, *t.* 1591).—This species, like *L. longiflorum*, is somewhat tender in this country, needing slight protection against frost, and shelter from extreme wet. In this group it is known by its scattered leaves, and its gradually narrowed funnel-shaped flowers, the leaves, morever, being fewer, and the perianth segments broader than in the allied *L. nepalense.* It grows from 1 ft. to 2 ft. high, and has stiff erect stems of a shining green colour, spotted with purple. The leaves are scattered, from 12 to 20 in number, dark green, lanceolate acute, with several (5 to 7) distinct nerves, the

lower leaves being 4 in. to 6 in. long, the upper shorter and broader, often an inch in breadth. The flowers, which are very sweet-scented, are usually solitary on the wild plant, but the garden plants sometimes bear two or three, the perianth being 4 in. to 6 in. long, more or less ascending, very gradually widening into a funnel-shaped form, white internally, and on the outer side more or less flushed or mottled with purple, the segments being obversely lanceolate, often as much as 2 in. broad, and moderately recurved at the tip. The anthers are thick, oblong, with reddish-chocolate pollen.

This species, as its name indicates, is a native of Japan, and was introduced to this country through the East India Company in 1804. It has subsequently been gathered by Maximowicz in Japan, and by Oldham in the Korea. It was figured by Planchon in the *Flore des Serres* (t. 876-7), with the name of *Lilium odorum*, under the impression that the true *L. japonicum* of Thunberg was a scentless plant, with linear-oblong anthers, and yellow pollen, but more recent writers have not adopted M. Planchon's views.


LILIUM JAPONICUM.

L. JAPONICUM BROWNII (*Bury*, *Hexand.*, t. 2), the *L. Brownii* of Meillez, is a taller plant, the stems of which grow 3 ft. high, or upwards, and are marked with purple spots and lines near the base; the leaves (lower) are also 8 in. to 9 in. long, linear-lanceolate, and more numerous (25-30), while the flowers, sometimes three or four in number, are 7 in. to 8 in. long, more drooping, white, more heavily stained with purple on the outer side. M. Leichtlin and M. Duchartre state that it is a native of China, and probably of Japan also. It is a magnificent Lily, differing from *L. japonicum*, according to Messrs. Teutschel, by the form of the bulbs and the colour of the scales, as well as in the foliage and habit, and in the appearance of the bud, the fully expanded flowers having a closer resemblance to those of *L. japonicum*, like which it blooms in July.

12. Lilium nepalense (*Wall. Pl. Asiat. Rar.* iii., 67, t. 291).—This Indian Lily has more numerous leaves than *L. japonicum*, and shorter funnel-shaped flowers. The stems are erect, slender, glabrous, from 1½ ft. to 3 ft. high. The leaves are scattered and numerous (30-50), linear-lanceolate, the lower ones 4 in. to 5 in. long, comparatively thin in texture, and distinctly five-nerved. The flowers are solitary, or in few-flowered umbels, or loose racemes of five or six in number, subtended by rather large linear, leafy bracts. The flowers are broadly funnel-shaped, 4 in. to 5 in. long, white or ochroleucous, suffused more or less freely towards the base with purple, the segments being oblanceolate, and considerably reflexed when fully developed. The anthers are linear-oblong, half an inch long, and furnished with yellow pollen.

This well-marked species appears to have been introduced to England in 1855, but to have been since lost. It is found in the temperate regions of the Western and Central Himalayas, at an elevation of 7,000 ft. to 9,000 ft., and should prove amenable to culture. Mr. Baker suggests that its affinities are with *L. japonicum* on the one hand, and *L. candidum* on the other.

13. Lilium Krameri (*Bot. Mag.*, t. 6058; *Florist and Pomologist*, 1874, 13, with tab.)—This splendid Lily flowered last year for the first time in this country, three forms having been observed, namely,—that figured in the *Florist*, which was the finest, having rosy-blush flowers with very broad bluntish segments; that figured in the *Botanical Magazine,* which was very pale blush, with the perianth segments wavy and much acuminated; and another almost white. The stems are from 2 ft. to 4 ft. high, erect, smooth, and comparatively slender, glaucous-green, spotted with purple. The leaves are scattered, distant (15-16), linear-lanceolate, acuminate, five-nerved, and from 8 in. to 10 in. long. The flowers are very fragrant, white or blush, horizontal, solitary; the segments obovate-oblong, bluntish, or considerably acuminated, the inner ones nearly or quite 2 in. broad, spreading at the tip, or in some forms recurved in the upper third, and forming a broadly funnel-shaped perianth 6 in. to 7 in. long. The anthers are linear-oblong, three-quarters of an inch long, on filaments half the length of the perianth, the pollen being bright chocolate-red. The flowers are produced in July.

*Lilium Krameri* was introduced from Japan, but whether it was there obtained from wild habitats or from gardens is not quite certain. Messrs. Teutschel, through whom it was introduced, state that it was sent to them by Mr. Kramer, after whom it is named, as "a new Lily, obtained a long distance from Yokohama, in the interior of Japan;" and Mr. Kramer, moreover, who speaks of it as a form of *L. auratum*, mentions that his collector sends three different forms, and adds, "there are many startling varieties." Mr. Baker, whose opinion, as having well studied the genus *Lilium*, deserves full consideration, regards it as a hybrid between *L. speciosum* and *L. japonicum*, with the leaves of the former, and the perianth and anthers of the latter. We cannot detect in it any sufficiently close resemblance to *L. speciosum;* and if it be not a mere selection from *L. auratum* itself—a plant which is most varied in form and colouring—we think that it has more the aspect of a hybrid between *L. auratum* and *L. japonicum*, than between the two just named. In Messrs. Teutschel's view, "it seems a seedling form of *L. auratum*." They add, "It is a delicate bulb, and travels badly, scarcely one in ten having reached us in good condition; all our bulbs have had narrow elongate foliage like *L. auratum*."

L. KRAMERI BARRIANUM.—This is a smaller and more slender form, with the leaves more numerous and more crowded. The flowers are also smaller, the white perianth measuring four inches, and the anthers half-an-inch long. It is described by Mr. Baker, in a paper on the *Tulipeæ*, read before the Linnean Society.—T. MOORE.

## NE PLUS ULTRA PEA.

AS a late summer Pea I have not as yet found any other kind to excel this. I have it now (Aug. 15), and have had it for some weeks in very fine condition, notwithstanding the long-continued dry weather. It is a most abundant bearer, of superior flavour, and remains a long time fit for use—all great recommendations in its favour. Those who wish to have it fine I would advise to save their own seed, and in doing so to pay attention to the matter by selecting only the finest pods. By this means they will secure good, genuine seed, and by sowing thinly in rows about 6 ft. apart on deeply-dug ground, they will get good crops of Peas of the finest quality, well repaying any little pains or labour bestowed on them.—M. SAUL, *Stourton*.

## LAGERSTRÖMIA INDICA.

WE have had this magnificent flowering shrub in this country for over one hundred years, but seldom has it been seen in flower in any great degree of perfection, and in consequence its merits as a flowering acquisition amongst our stove-plants is but little known. The plant appears easy to grow, and as easy to flower, but in the want of knowing that easy method lies the difficulty. The *Lagerströmia* in question has been about this place for the last thirteen years. It was always grown in a pot, and once only did I ever see a flower upon it; this might possibly have served the purpose of a prying botanist, but as an ornamental plant for the stove it appeared to be of little use, and it was certainly of less use as a flowering-plant.

Lately I have been adopting, both in our stove and greenhouse, a general planting-out system in every available space. The plants, when turned out of pots into a deep, well-prepared body of soil, grow away amazingly, and assume such proportions as to size, health, and vigour as can only be arrived at in pot-culture by the greatest amount of labour and pains. Into one of those prepared beds, situate at the end of a plant-stove—in February last—we turned out of pot and planted our *Lagerströmia,* feeling inwardly so far satisfied, that even if it did not flower any better in its new quarters than it did when confined to a pot, it at all events stood a better chance of being preserved in our collection than when being tossed about in a pot almost uncared for, and I fear, too, many times, but very poorly provided for.

For some time the bush gave but little symptoms of growth, but towards the end of June I observed a general breaking into bud all over the plant. I could not at first at all satisfy myself whether they were flower-buds or leaf-buds. I had, however, not long to wait, for toward the second week in July, the plant showed decidedly that it meant to flower, and that liberally. We had now for about three weeks the pleasure of beholding 500 spikes of the most lovely pink infloresence, such as certainly must satisfy the most hypercritical. The flower-spikes varied in length from 4 in. to 12 in., and the number of florets on the flowering-spikes amounted collectively to 2,000. The plant altogether is only 5 ft. high, by 4 ft. through. How it will comport itself after this severe flowering remains to be seen. Of one thing I feel satisfied, and that is, that the turning the plant out into its cool bed of soil was the means of inducing it to flower so abundantly, and to any one who may have a *Lagerströmia* in a pot I would say—by all means plant it out.—Wm. Miller, *Combe Abbey Gardens.*

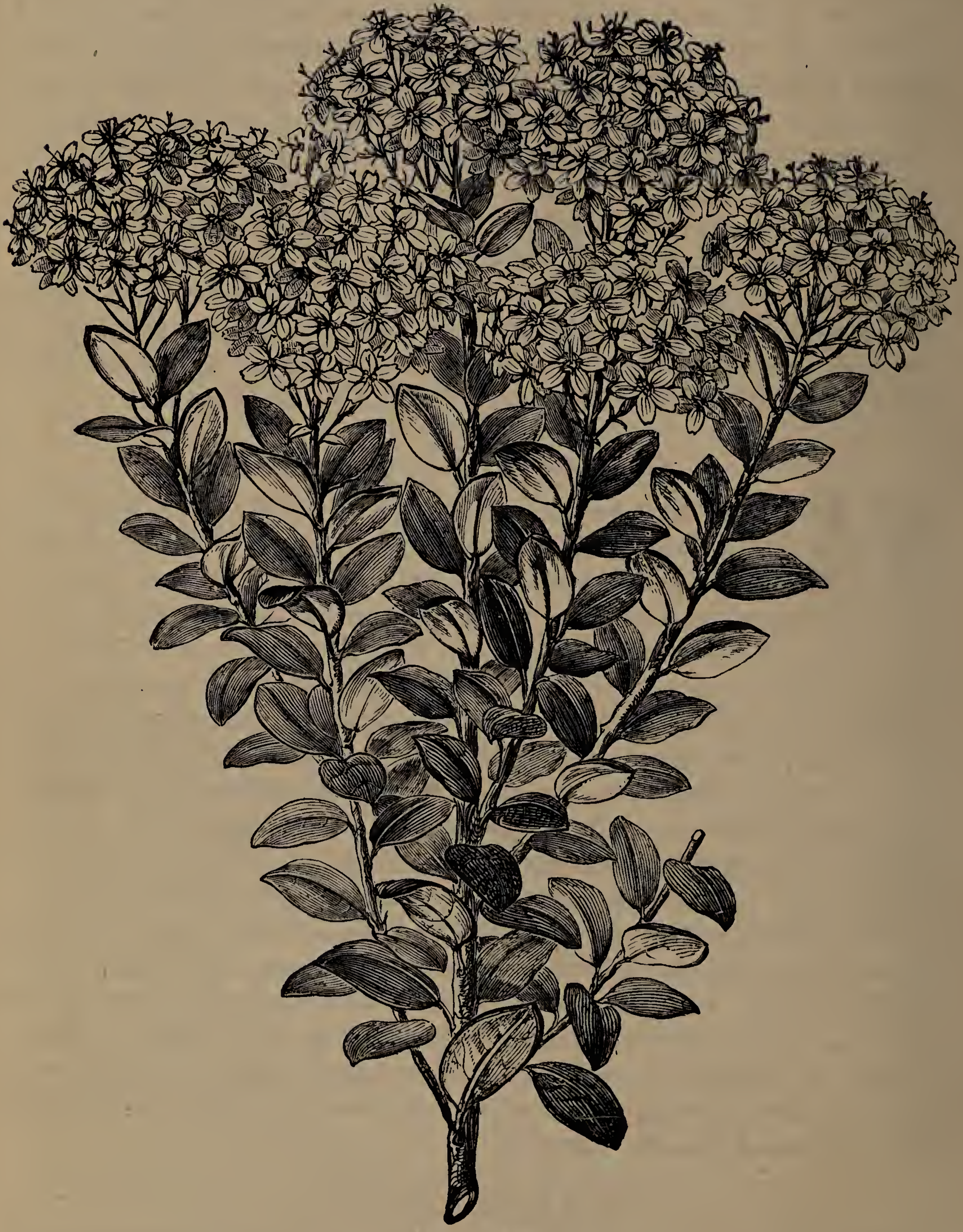
## NEW BEDDING VIOLAS.

THERE may be some amongst the readers of the Florist who may not have made a direct personal acquaintance with either of the new forms of Viola, which have originated from the *V. cornuta.* To such I heartily recommend the three forms named, *Viola cornuta Sensation*, *Viola cornuta Admiration*, *Viola cornuta Purple Prince.* The former is perhaps the earliest of these examples of "new blood," the second and third, the former especially, being among the most telling of all summer bedding plants, especially when mixed with any of the white variegated-leaved Pelargoniums, such as Bijou, Flower of Spring, &c. As even a preferable companion to these, I may instance the old Mangles Variegated Pelargonium, amongst which I have some of these Violas growing, and the effect is certainly heightened, as the Violas seem to show up better from amidst the more procumbent stems and the smaller blooms of the latter kind.

Then, again, as early spring plants, for blooming along with the Daisies, Yellow Cliveden Pansies, Silenes, Primroses, Polyanthuses, and Tulips, they are unapproachable. I have also seen them introduced in circular masses in front of young shrubberies, thus forming a continuous link in the chain of display, brilliant in their effect, of which similarly-coloured Crocuses give the foretaste, but which these Violas certainly beat, both in respect of colour and of distant effect.—William Earley, *Valentines.*

## OLEARIA HAASTII.

THIS New Zealand shrub proves to be hardy in the neighbourhood of London, having grown without injury for several years at Messrs. Veitch's nursery at Coombe Wood, in Surrey. It belongs to the Composite order, and is most attractive as a flowering shrub, being literally covered with masses of its white blossoms, which last for a considerable period. This floriferous habit, as well as the neat character of the foliage, are well shown in the accompanying figure from Messrs. Veitch's Catalogue.



OLEARIA HAASTII.

Dr. Hooker, in his *Handbook of the New Zealand Flora*, describes this *Olearia* as a small shrubby tree, with ovate or oblong or linear-oblong very coriaceous leaves, which are green and shining above, smooth beneath, and there white with closely-appressed down. The flower-heads are in loose peduncled corymbs, the ray-florets being few and broad, and the involucres cylindric, with imbricated scales. It is no doubt a very desirable hardy shrub, and has received at the hands of the Royal Horticultural Society a First-class Certificate.—T. M.

## CULTURE OF THE GOOSEBERRY.—I.

THE extremely variable nature of the growth of the different varieties of Gooseberry, and the difficulty often experienced in getting at the fruit on some of the strong-spined, close-growing sorts, has led me to believe that a few remarks on an improved mode of culture which, although by no means new, is not often adopted, may be acceptable to amateur growers, to whom also any system which economises space, as this purposes to do, will, no doubt, be acceptable.

To all such I recommend the adoption of the Espalier mode of growth, as in every respect far more suitable for their purpose than the common mode of bush training, as it has a very neat and pleasing appearance, and the trees are far more easily manipulated and pruned than when sprawling over the ground. The system of pruning also is so very much simplified, that the veriest tyro could hardly make a mistake when the trees are fairly started on the right system.

We often find, in the common mode of bush-culture, that it is a difficult matter to prevent many sorts, such as the Warrington, for example, from growing as it were downwards, almost like weeping-trees; and being thickly set with spines, pointing mostly inwards, the operations of thinning-out the young fruit and gathering the ripe fruit are thereby rendered rather unpleasant; besides which, the weight of fruit often bends down the branches so much, that on the occurrence of heavy rains all that on the lower branches is rendered comparatively useless for delicate purposes. By the system of training to Espaliers, all these troublesome matters are reduced to a minimum. Of course, there are ways and means of circumventing these and other inconveniences, even on the bush system of training, as, for instance, by securing much longer stems free of wood, and systematically thinning-out the branches, as only good practical hands know how; but these are more complicated in their management, and I claim for the Espalier system a perfect simplicity of management, and therefore, hold it to be the best adapted for the purposes of the amateur, to whom also it should further recommend itself as leaving a greater space for cultural operations, as well as from its general neatness of appearance.

The amateur may obtain at the Nurseries young bushes fit to commence training at once, but if he prefers it, and time is not an object, he will do well to prepare his own plants, by selecting in October the strongest shoots he can obtain of such varieties as he may prefer (of which a list for guidance will be hereafter given), shortening them to six inches, and removing carefully every bud except the two at the top. The reason for this is to prevent the future tree from throwing up suckers, which are very detrimental. The bottom of the cuttings should be cut through horizontally close to the joint, and they should then be planted in an open space, in good ground, inserting four inches of the cutting, and leaving the two buds well above the surface. The object to be aimed at is to get a good stout stem a clear foot above the surface, and therefore, as soon as the shoots show signs of vitality, and probable growth in the spring, the healthiest shoot from the two buds must be retained and encouraged to grow up straight and strong, by training it to a stake as it advances in growth. With erect-growing sorts this is not much trouble, but with varieties of a drooping habit, constant care must be taken to fasten them to the stake whilst the shoots are young and pliable. This is all the care they will require the first year.

At any time during the dormant season these shoots should be shortened, so as to form a good stem one foot from the ground, at which point the future head, for training purposes, will start. Most of the buds, except four or five at the top, may be rubbed off. In the spring, as soon as growth commences, preparation must at once be made for training, but as they will not make any very great growth the first year, a few straight stakes, from two to three feet in length, will be all that will be necessary to keep the young shoots in position.

There are two methods or forms of training, either of which may be adopted with advantage. One is to train up a strong centre stem, and from this lead out the side-shoots horizontally at equal distances. The other is to train out two strong shoots horizontally, one each way, from the centre, but no centre shoot, these two side-shoots being trained Cordon fashion, about one foot from the ground, and the bearing shoots trained upright from these to the top of the trellis at equal distances, so as to cover the whole of it. The shoots may also be trained in the shape of a fan, that is, diverging in all directions from a common centre ; but I do not recommend this as the most economical mode of training, the growth being more unmanageable from the tendency, which all fruit-trees trained in that manner have, to concentrate the growth in the centre of the tree.

It will thus be seen that the young shoots of the second year's growth must be trained in accordance with the mode selected, but as I purpose to enter rather minutely into the first few years of training, I must reserve that for another paper.—John Cox, *Redleaf.*

## PACHYPHYTUM BRACTEOSUM:

### An Easy Method of Propagating.

FOLIAGE plants are now so generally grown in gardens for decorative purposes during the summer months, that any information respecting the best means to increase the stock of some of the more choice of them, cannot fail to prove interesting to readers of the Florist.

The propagation of the handsome succulent whose name heads this paper can be most rapidly managed by seed, and it is comparatively easy of accomplishment, to those who have a stove in which to raise it. But with those who love and grow foliage plants, and have nothing better than a cold frame or cool house in which to winter their plants, seeding is out of the question. But there is a means of propagating this succulent that is easily worked out. Last winter, I kept through the season eight fine plants of the Pachyphytum in a cold house without fire-heat. I kept them in the warmest position and perfectly dry, and notwithstanding that the frost got into the house, the plants were uninjured. In May I broke away from the stem of each plant a few of the lowermost leaves, and laid them on a shelf in the greenhouse for three days to get callused. I then filled some 32-pots half-full of drainage, filling up with a light, sandy soil, and on this I laid the leaves of the Pachyphytum, so that the base of each could come into contact with the soil. In this way I covered the surface of each pot, and shook some fine soil in among them, but only enough to partially cover them. They were placed on a dry shelf, and when engaged in syringing the house, I would occasionally allow the spray to fall on them. A good proportion of the leaves have already thrown out small plants at the base, and by this means I have acquired a good accession to my stock. I have tried the same experiment with *Echeveria rosea*, and have been equally successful. [*Echeverias* generally may be increased freely in this way.] There are many succulent plants of this character that can be kept through the winter in a cold house, if also kept perfectly dry. Damp is their great enemy ; it slays far more plants than frost during winter.—R. Dean, *Ealing.*

# NOTABLE NEW PLANTS AND FLOWERS.

[F.C.C. = First-class Certificate; B.C. = Botanical Certificate; F.C. = Floricultural Certificate.]

**AËRIDES VIRENS ELLISII** [B.C.].—A handsome variety, with short bright green leaves, and white purple-spotted flowers, in the way of Dayanum.—*Mr. B. S. Willliams : R.B.S., June* 24.

**BEGONIA VESUVIUS** [F.C.].—A fine new hybrid of the bulbous group, having dark glossy foliage, and a profusion of large vivid vermilion-scarlet flowers.—*Messrs. Veitch & Sons : R.B.S., June* 24.

**BETULA ALBA FOLIIS PURPUREIS** [F.C.C.].—A variety with striking-looking dark purplish-red leaves, and very promising as a pictorial tree.—*Mr. W. Paul : R.H.S., July* 15.

**CATTLEYA MOSSIÆ MAJESTICA** [B.C.].—A variety with large flowers of a fine rosy-blush, the lip finely frilled, and having in front of the usual orange blotch a short central bar of crimson, from which a few forked crimson veins diverge.—*Mr. B. S. Williams : R.B.S., June* 24.

**CAMPANULA SMITHII** [F.C.C.].—A very pretty dwarf hardy perennial, an accidental hybrid raised between *C. fragilis* and *C. pumila alba*, with stems about six inches high, and bearing a profusion of semi-erect delicate greyish-blue bell-shaped flowers.—*Mr. Smith : R.H.S., July* 15.

**CERASUS MAHALEB PENDULA** [F.C.C.].—A beautiful free-growing hardy deciduous tree, with long slender weeping branches, clothed with neat ovate leaves. A most elegant weeping tree of the smaller series.—*Messrs. Paul & Son : R.H.S., Aug.* 19.

**COLEUS DUCHESS OF EDINBURGH** [F.C.C.].—A novel and striking variety, the leaves being variously mottled, in some parts maroon with green margin, in others rose-colour with creamy margin, the colours being grotesquely intermixed.—*Mr. W. Chitty; R.H.S., June* 17; *R.B.S., June* 24.

CORNUS ALBA MARGINATA [F.C.C.].—A variety of the handsome red-barked Dogwood, in which the leaves are conspicuously margined with white.—*Messrs. Paul & Son: R.H.S., Aug.* 19.

CROTON COOPERI [B.C.].—A distinct form, with large oblong, spirally acuminate, slightly wavy, red-stalked leaves, freely veined and blotched with yellow, the markings changing more or less to red.—*Messrs. Veitch & Sons: R.B.S., June* 24.

ECHEVERIA PEACOCKII [F.C.C.].—A robust-habited, rosette-formed species, from Mexico; the handsome obovate-spathulate subcarinate leaves being covered with a very dense glaucous bloom; the flowers are bright red, in scorpioid spikes. —*Mr. J. Croucher: R.H.S., July* 1.

FUCHSIA PROCUMBENS [B.C.].—This, which was shown under the name of *F. Richei*, is a very distinct species, of slender, creeping habit, from New Zealand; it has small ovate or orbicular leaves, and erect, apetalous flowers, with an orange tube, and green and maroon much reflexed segments; it is likely to be somewhat hardy, and adapted for rockwork.—*Mr. Kinghorn: R.H.S., Aug.* 5.

GLOXINIA MARQUIS OF LORNE [F.C.C.].—White throat, shaded with lilac at the tip of the segments, and with pink exterior; large in size, and fine in form.—*Messrs. Veitch & Sons: R.B.S., June* 21.

GLOXINIA MR. HAINES [F.C.C.].—An erect-flowering variety of a shaded pink tint, the throat being broad, open, and of a deep crimson colour.—*Messrs. Veitch & Sons: R.B.S., June* 24.

GLOXINIA MISS HANNAH DE ROTHSCHILD [F.C.C.].—Rosy-lilac, with a well-defined purple throat; large and very fine.—*Messrs. Veitch & Sons: R.B.S., June* 24.

HYPOLEPIS BERGIANA [F.C.C.].—A beautiful greenhouse Cape fern, shown under the synonym of *Cheilanthes Bergiana;* it has a chestnut-brown tomentose stipe 2 ft. long, and a deltoid quadripinnate frond 1-1½ ft. long, finely cut into small herbaceous hairy segments.—*Messrs. Rollisson: R.B.S., April* 22; *R.H.S., Aug.* 19.

IRIS KÆMPFERI EDWARD GEORGE HENDERSON [F.C.C.].—A magnificent variety of this fine Japanese Iris, with large flat shaded purple 'double' flowers, with bright golden streaks at the base of the six broad spreading segments.—*Messrs. E. G. Henderson & Son: R.H.S., July* 1.

IXORA FRASERI [F.C.C.]—A grand variety, with remarkable bright orange-red flowers, in large clusters; and having bold, free, and healthy leaves, of an oblong-elliptic form; it is said to possess a good degree of hardihood of constitution.—*Mr. J. Fraser: R.H.S., July* 15.

LOBELIA (PUMILA) DUCHESS OF EDINBURGH [F.C.C.].—A dwarf, compact, white-flowered variety of the *pumila* section, and promising as a bedder.—*Mr. C. Lidgard: R.H.S., June* 17.

LOBELIA (PUMILA) MAGNIFICA [F.C.C.].—A variety of the *pumila* section, with large deep violet-blue flowers, and very free and effective.—*Mr. J. Bester: R.B.S., June* 24; *R.H.S., July* 1.

LILIUM SPECIOSUM ATROSANGUINEUM [F.C.C.].—A fine variety of the well-known *L. speciosum*, with the segments of a deep blood-red, richly spotted, and evenly margined with white.—*Mr. G. F. Wilson: R.H.S., Aug.* 5.

LILIUM WASHINGTONIANUM PURPUREUM [F.C.C.].—A pretty Californian Lily, 1-1½ ft. high, with whorled leaves, and a cluster of about eight small purplish-white flowers, with small maroon spots.—*Messrs. Veitch & Sons: R.H.S., June* 17.

Metroxylon filare [f.c.c.].—A very elegant Palm, with a tall smooth stem, and pinnate spreading fronds, the petioles of which have distinct slender spines, and the narrow pinnæ terminate in a long awn. It comes from Ceram.—*Mr. W. Bull: R.H.S, Aug.* 5.

Pelargonium (double) Jean Alegatière [f.c.c.].—A large-flowered double variety, the flowers lilac, with pink on the edges of the petals.—*Mr. W. Paul: R.H.S., July* 15.

Pelargonium (tricolor) Dr. Masters [f.c.c.].—A very bright-looking variety, of vigorous growth, the leaves being handsomely marked with green, clear yellow, and bronzy-scarlet.—*Messrs. E. G. Henderson & Son: R.H.S., July* 1.

Pelargonium (zonal) Sir Garnet Wolseley [f.c.c.].—A zonal variety with large bright scarlet flowers of fine quality.—*Mr. J. George: R.H.S., July* 15.

Rose (h.p.) John Stuart Mill [f.c.c.].—A fine, full, rounded flower, of a dark rose-colour; very promising.—*Mr. C. Turner: R.B.S., June* 24.

Rose (h.p.) William Ingle [f.c.c.].—A somewhat remarkable and novel flower, the pale lilac ground-colour being striped and blotched with white.—*Mr. W. Ingle: R.B.S., June* 24.

Rose (h.p.) Sir Garnet Wolseley [f.c.c.].—A reputed seedling from *Prince Camille de Rohan*, with large, full, and finely formed deep rosy-crimson flowers.—*Mr. J. Cranston: R.H.S., July* 1.

Rose (h.p.) Royal Standard [f.c.c.].—A good, full, compact rose, of fine globular shape, and of a pleasing hue of a pinkish-rose.—*Mr. C. Turner: R.H.S., July* 15.

Silene pendula flore-pleno [f.c.c.].—A good double-flowered form of the well-known annual, with the flowers large and full, and of the brightest rose-colour.—*Mr. R. Dean: R.H.S., July* 1.

Sonerila Hendersoni and S. Hendersoni argentea [f.c.c.].—Two forms, distinct in character, of a pretty dwarf stove Melastomaceous plant—the one having the leaves red beneath, and blotched with silvery-grey; the other with the surface of the leaf more freely, though not entirely, covered with silvery-grey.—*Messrs. E. G. Henderson & Son, R.H.S., July* 15.

Tillandsia Zahnii [b.c.].—A pallid, almost transparent-leaved Bromeliad, the leaves when young being deep amber veined with red, and afterwards of a rich scarlet, which becomes deeper with age; the flowers are panicled, rich golden-yellow.—*Messrs. Veitch & Sons: R.B.S., June* 24.

Viola cornuta Admiration [f.c.c.].—A fine variety, with large, well-formed purple-blue flowers.—*Mr. B. S. Williams: R.B.S., June* 24.

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## ON BEDDING-OUT.

I HAVE somewhere read, in what is called in the North a song-ballad, as follows:—

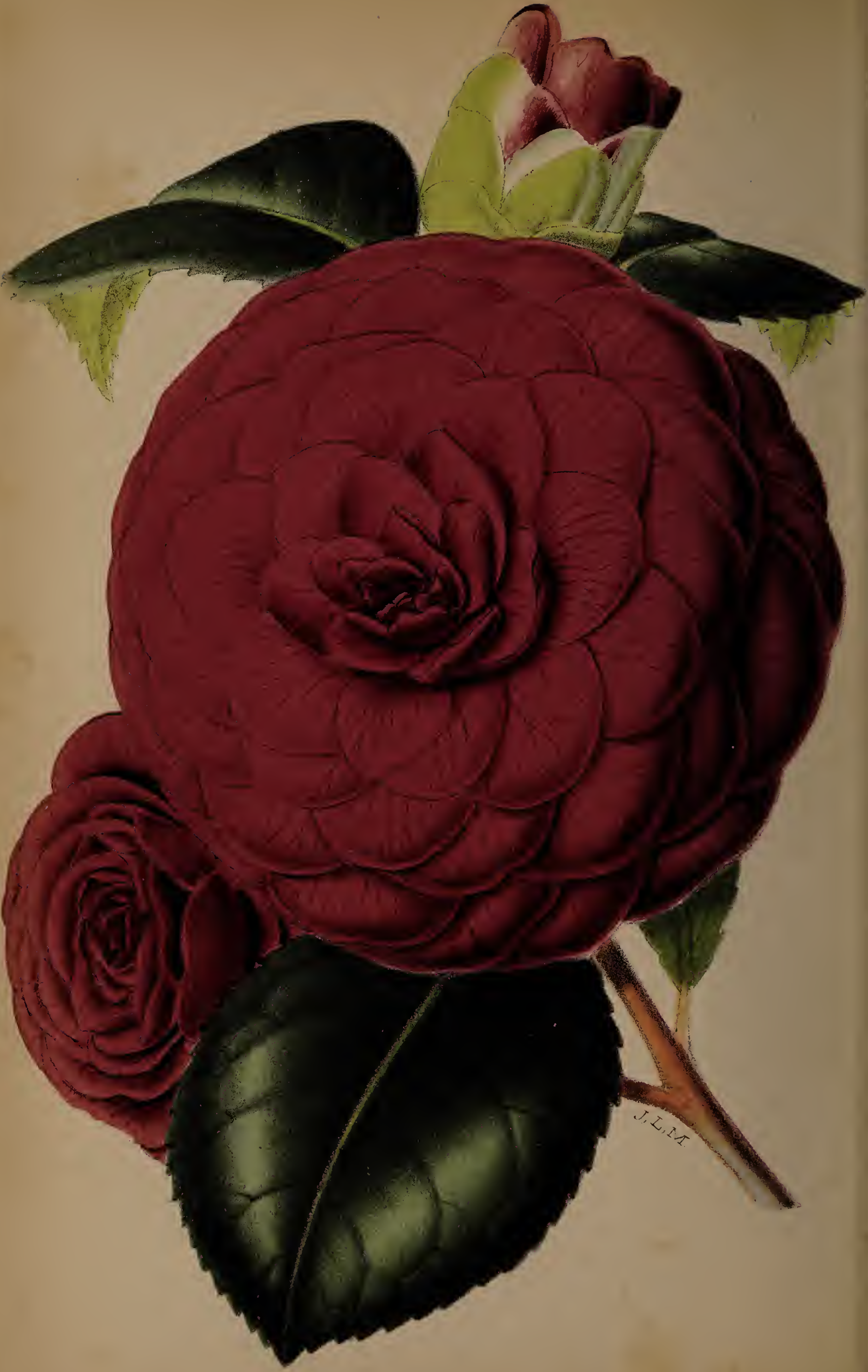
> "There was an old woman tossed up in a blanket.
> 'Old woman, old woman, old woman!' says I,
> 'What are you doing up there so high?'
> To sweep the cobwebs out of the sky:
> But I'll be down again by and by.'"

Now, on seeing a large bed of the Mrs. Pollock Pelargonium of a bluntly conical shape, like a well-formed potato-hog, I could not help calling to mind the above ballad, and would calmly inquire 'what was she doing up there so high.' In beds of ordinary dimensions, it is a good rule to have the centre of the bed of exactly the same height as the edges, so that if a line were drawn across the bed it would touch both the grass edges and the centre of the bed, the grass verge being always one inch higher than the soil of the bed; this will give the bed apparently an inch of rise, whilst all the while it is perfectly flat. Now, such a bed can be seen, and its character taken in at a glance, but when the conical form is used, there is always a portion of the bed hidden. A bed of Scarlet Verbena, or one of Scarlet Ranunculus, when seen at a glance, gives one the genuine ideal of an English garden flower-bed. It is not only the individual beauty of the plant, but it is enriched by the social character, the bond of union, and its being but only one, and that without any break; and as it has no rise, it is being flat, at ease, and at rest. There are, moreover, practical difficulties attending the management of raised beds: for instance, they cannot conveniently be watered either by rain or by hand.

A certain painter said to his pupil who had painted the portrait of a lady, that he had failed to paint her *fair*, and had therefore made her *fine*. Now, in trying to make summer beds more conspicuous by mounding, the earth which should be hidden is brought into notice, and we get back to the days when our shrubberies were carefully hoed and raked, instead of being carpeted with lawn grass, as we see them in all good gardens. Succulent plants, such as the *Echeverias*, whose homes, like those of the Houseleek of thatched-house celebrity, are on the house-tops, seem always degraded when seen on level ground. There is a line to be drawn between the succulent bedding plants, and such as *Pelargoniums* of all hues, beautiful though they be; and the favour with which *Echeverias* are received seems a guarantee that better days may dawn, when the glories of *Mesembryanthemums* (mid-day flowers), now little known, shall come upon the carpet. Then, indeed, one might raise the beds, and when the props have raised the flowers as high as those of a rose-tree, the line of beauty will be nearly on a level with the lady's eye that comes to admire.—ALEX. FORSYTH, *Salford.*

## THE GUELDER ROSE.

THE Guelder Rose, as represented by the type, *Viburnum Opulus*, which is a true Britisher, is to be met with growing wild in many a moist marsh-land or damp and swampy copse athwart the country. Its frequent associates during the winter are known to many a keen sportsman to be the woodcock and the snipe. Very handsome and striking withal is this plant, with its three-lobed leaves, and its flattened bloom-heads of pearly white, variable in size and shape, and extremely bright shining and showy are the heavy bunches of cherry-red berries which hang pendent after the falling of the leaves. There are three or four distinct forms of



L. Macfarlane del

CAMELLIA THOMAS MOORE.

*V. Opulus*, reputed garden varieties, or "sports," namely, the sterile "snowball" variety, a dwarf form named *V. O. nana,* and one with variegated foliage, *V. O. foliis variegatis.*

The true Guelder Rose, or Rose de Gueldres, with us commonly called Snowball-tree, is a sterile-flowered variety, the blossom-heads of which form large globular-shaped masses of white florets, and contrast strongly with the flattened heads of the type form of the species. *V. Opulus* must not be confounded with a commoner native species, known generally as the Wayfaring-tree, *V. Lantana,* whose leaves are white on the under-side, and which has no such showy blossoms as *V. Opulus.* The poet Cowper refers to the sterile form as,—

> "Throwing up into the darkest gloom
> Of neighbouring cypress, or more sable yew,
> Her silver globes, light as the foamy surf;"

and few persons can behold a tree laden heavily with these quaint huge white globes of inflorescence, without being struck with a feeling of admiration.

The Messrs. Veitch and Son have lately exhibited upon two different occasions a Chinese species, with peculiarly crimped ovate leaves, *V. plicatum*, the heads of blooms upon which are of even a purer white than those of our common Guelder Rose, whilst the individual florets or petaloid formations are much larger, making up a plant altogether superior to our own older favourite. [Another Chinese ovate-leaved species, *V. macrocephalum*, produces a similar snowball-like inflorescence, but larger (often eight inches across) and more pyramidal in outline; this is of an equally ornamental character.]

The growth of the Guelder Rose varies very considerably in different counties and situations. Here, in Essex, it does better than I have ever seen it do before in any place; the blossoms are extremely large and numerous, and finely developed upon every part of the growth made during the current season. There can be no doubt a moist site suits the more ornamental forms, in the same degree as it does the original species,—a fact that should never be lost sight of when planting.—WILLIAM EARLEY, *Valentines.*

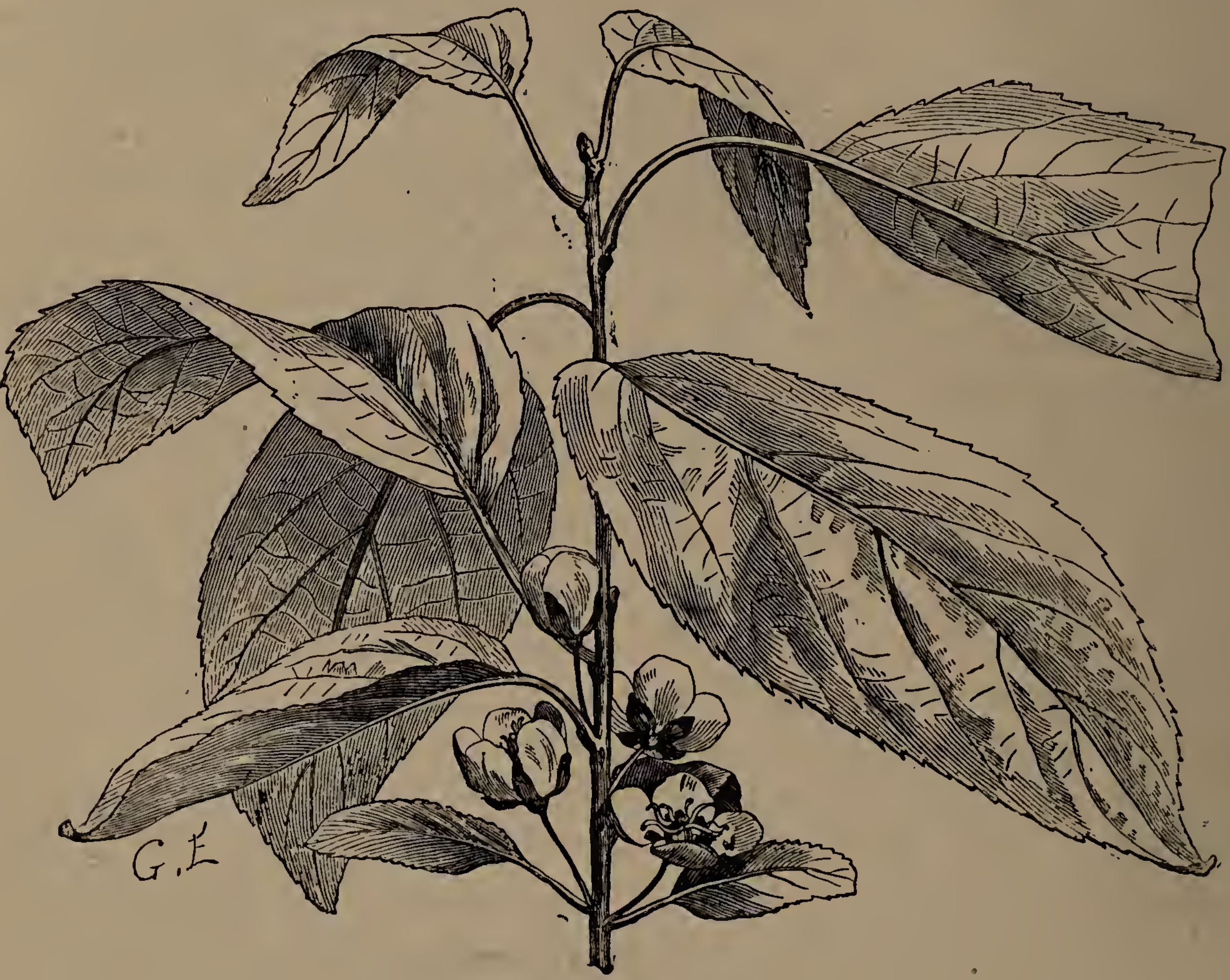
# CAMELLIA THOMAS MOORE.

WITH AN ILLUSTRATION.

FOR the opportunity of figuring this fine variety of Camellia, we are indebted to Mr. Williams, of the Victoria Nursery, Upper Holloway, who holds the stock. As will be seen by the figure, the foliage is bold, and the flowers are large, regularly imbricated with thick, fleshy, evenly-edged petals, and of a rich deep showy crimson colour, the deepest of any variety in cultivation. These qualities are such as to place it in the front rank amongst modern varieties. We have not yet learned the particulars of its origin, but these Mr. Williams will, no doubt, make public in due time. Meanwhile the variety should be made a note of, as one to be procured as soon as possible. —T. M.

## ACTINIDIA KOLOMIKTA.

THIS hardy Japanese shrub produces long slender flexuose or climbing branches, which are covered with smooth brown shining bark, and furnished with thin alternate glabrous elongate-ovate acuminate, sharply but shallowly-toothed leaves. The flowers, which are four or five-petaled, are white, and of a subglobular form in consequence of their not fully expanding; they are axillary, pedunculate and solitary, and appear about the end of May.



ACTINIDIA KOLOMIKTA.

Without any pretensions to the rank of a showy plant, the *Actinidia* is distinct in character, and worth growing as a hardy deciduous flowering shrub, suitable for walls or pillars. It is not very particular as to soil, but peat-earth is found to be congenial to it in the earlier stages of growth. The genus has usually been referred to *Ternströmiaceæ*, in which it is placed by Bentham and Hooker; but Baillon regards it as belonging to *Dilleniaceæ*, and as being distinguishable from the true *Dillenias* by its small flowers with versatile anthers. Our figure is that published in the *Revue Horticole.*—T. M.

## LISIANTHUS RUSSELLIANUS.

THIS is a plant very seldom seen in cultivation, either in public or private gardens, nevertheless, it is not difficult to grow, and when in full beauty, it is most distinct in character. Moreover, the flowers, which do not fade quickly, are produced in great profusion. One reason why it is not often seen may be that it is difficult to procure. I do not know any nursery where plants are to be obtained. Most of the seedsmen can supply seeds, but I would warn would-be purchasers not to be too sanguine that the seeds will grow. I have bought it many times, and have always, in such cases, failed to produce plants, though the utmost care had been taken with the seeds.

The seeds are very small, similar to those of the Calceolaria, and a successful grower of Calceolarias would not fail to raise a batch of seedling Lisianthus; the latter, however, requires heat, whereas the Calceolaria would vegetate and thrive best in a cool house. The seeds should be sown in sandy peat, scarcely covering them with silver-sand, and placing the pot on a shelf near the glass, in a cool stove or intermediate house. A square of glass should be laid over the pot, which should also be shaded from the sun, and when water is required the pot should be dipped in a pail three parts of its depth for half a minute, not long enough to soak the mould, but merely to wet it, for if the mould is made too wet, the seeds will perish. When the plants appear they must be attentively watched, and when water is required, it must be applied according to the previous instructions. When the plants can be handled, pot them off, three in a small pot, again using sandy peat, which is the best potting material all through, using it fine when the plants are small, and only the tough, fibry portion at the last shift. Nine-inch pots are sufficiently large to flower the plants in.

I have read somewhere that cold pits are the best structures wherein to grow this *Lisianthus*, but in practice I have not found that they succeed best there. The plants under my care that have been in flower this season were grown on shelves near the glass in the Cucumber-house, where the temperature is seldom below 65° in winter. It is also absolutely necessary to protect the plants from the sun. Early in March they showed signs of distress when the sun shone out brightly, and had to be shaded. However, the plants in flower will well repay any attention that they may require, and the more difficult our pets are to grow, the more are they esteemed. I may say that the flowers are of a lilac-purple colour, and resemble a well-shaped, small tulip; they are also produced in great profusion.—J. DOUGLAS, *Loxford Hall Gardens.*

## GREENHOUSE DAPHNES.

OF these odoriferous evergreen shrubs there are two varieties that have become especial favourites, on account of their delicious fragrance—*Daphne indica alba*, and *D. indica rubra.* Flowering as they do during the dreary months of winter, they are alike prized for cutting, or for placing in the conservatory or sitting-room. The variety *alba*, being the strongest-scented, is to be preferred on that account, although it by no means possesses the best habit of growth, being somewhat stubborn and lax, a defect which may be successfully combated by a little careful attention in cultivation. From the miserable examples, however, which we are accustomed to meet with, it may be doubted whether the requirements of these charming plants, simple as they are, are generally understood.

We have these *Daphnes* grafted upon various stocks, one of them being the Mezereon (*D. Mezereum*), a deciduous species, upon which it is found to grow very compactly and to flower freely; in fact, some of our most extensive propagators of this class of plants believe that *D. indica alba* flowers best upon this stock. Others graft them upon *D. Laureola* and *D. pontica*, both of which are well-known free-growing plants, and by no means particular as to soil, since we find them growing luxuriantly upon a healthy texture of peat, as well as upon simple loams. As these ingredients vary so materially in texture, I should be right in recommending a compost of two parts of fibrous sandy loam to one of fibrous peat, adding sand to insure porosity. Clean pots and thorough drainage are important considerations, and so is the circumstance of potting quite firmly, so as to insure the soil keeping healthy. If the compost about the roots is at any time allowed to become sodden, the plant must be shaken out and repotted. This soil will do equally well for plants established upon their own roots, on which I find them to grow quite as freely as when grafted. They are more quickly got up in private places by means of cuttings, as seed is two years in vegetating, and should be kept for twelve months in sand previously to its being sown. Firm, half-ripened wood will root freely if inserted in light soil in autumn; and plants thus obtained must be potted on as they attain strength.

Early in the season, or so soon as the plants show signs of breaking, they must be examined and repotted, using pots rather small in proportion to the roots, as they must by no means be at any time over-potted. Train them into form, using the knife sparingly, as they do not improve by being much pruned. Place them near to the glass in a mild, genial heat of from 50° to 55°, and frequently syringe them, watering carefully at the root, until they become established. If all goes well, they will soon begin to make free growth, and then the points of the shoots should be pinched out, which will tend to furnish the plant more fully. As soon as they again show signs of breaking, shift them into larger pots, if necessary, and encourage fresh growth.

After this stage, stopping, excepting in the case of small-sized plants, must be discontinued; and as they attain full growth, the thorough maturation of the wood must be promoted by fully exposing them in a thoroughly ventilated structure, for without the wood is well ripened, the flowering will not be satisfactory. As the wood becomes consolidated, they will be benefited by full exposure for a short time.

It is my opinion that this plant sustains the greatest injury after blooming by being thrust on one side, and overlooked until it has made a portion of its growth in a weak, sickly state—at least, I have often seen the plant in this neglected condition, which should be guarded against, especially on account of its disposition to start early into growth. The cultivation of these *Daphnes* is so simple, and their blossoms so delightfully sweet, that it surprises one to find how seldom they are to be seen satisfactorily grown.—GEO. WESTLAND, *Witley Court*.

# GARDEN GOSSIP.

AT the *Royal Botanic Society's Evening Fête*, on July 8, Mr. W. Paul supplied a novel exhibition of *Cut Roses*, which may possibly be utilised at future exhibitions. The idea, which was successfully carried out, was to show the effect of groups of beds of Roses on grass, with due attention to harmony of colours. In most cases each bed was occupied with one variety only, but beds of mixed colours were occasionally introduced for the sake of variety. In some groups strong contrasts were arrived at, in others harmony of colouring, shade softening into shade. The flowers were placed in short stone bottles, in which the flowers were loosely arranged with buds and leaves as they grow naturally on the bushes. The extent and completeness of the arrangement may be surmised from the fact that about 6,000 trusses of flowers were used. The varieties employed were those best suited for planting in masses, such as Général Jacqueminot, Firebrand, Madame Victor Verdier, crimson; Marquise de Castellane, Peach Blossom, Mademoiselle Thérèse Levet, rose-coloured; Madame Plantier, and Mrs. Bosanquet, white; Madame Falcot, yellow; and most of the leading Roses, new and old, of every colour and shade. The plan, we understand, was furnished by Mr. John Gibson, jun.

—— THE *Gardeners' Chronicle* gives its usual reports on the *Condition of the Fruit Crops*, from which we learn that *Apricots* have yielded generally an average crop, though the fruit has been small; *Apples* have furnished a moderate and partial crop, good in sheltered places; *Pears* are, generally speaking, plentiful; *Plums* have yielded a good average crop; *Strawberries* were plentiful, but owing to the hot weather at the time they were in season, they were soon over; *Cherries* furnished an average supply, and Morellos a plentiful one; *Peaches* and *Nectarines*, speaking generally, have ripened fairly well, and in places are abundant; *Figs* are generally scanty; Small Fruits, including *Raspberries* and *White* and *Red Currants*, have been plentiful; but *Black Currants* have been deficient, and the bushes have suffered severely from insects. *Nuts* of all kinds are below the average. The cold weather in March was followed by a period of unwonted heat, during which fruit-trees made great progress; but in May, and even in June, late frosts occurred, which did much damage to some things, leaving others unaffected, probably because the fruit was well set.

—— THE returns of *the Potato Crop*, published in the same paper, show that there is a good average crop, and very little disease. The tubers are often small, and in some cases are grown out or 'super-tuberated,' but taken as a whole the crop is a good one, especially in Ireland.

—— A purple variety of *Clematis Flammula*, which it is proposed to distinguish by the name of *C. Flammula roseo-purpurea*, has been raised by Mr. G. Jackman. Several plants have been observed in a bed of transplanted seedlings of the sweet-scented Clematis, which had been raised from seeds ripened in contiguity to plants of some of the purple-flowered forms of *C. Viticella.* The novelty has, indeed, quite the appearance of being an accidental hybrid between *C. Flammula* and *C. Viticella*, though in regard to free vigorous habit of growth, abundance of flowering, and strongly-marked Hawthorn-like fragrance, it partakes most strongly of its mother-parent, flowering also at the same season—from the middle of July onwards. This will be a fine acquisition amongst hardy climbers, and will be welcomed, not only for its well-marked purple colour, but also for its delicious perfume. It is quite unlike the fragrant C. cœrulea odorata both in habit and flowers, being a true Flammula in its growth and leafage.

—— FEW annuals are better worth growing than the beautiful hardy *Chilian Salpiglossis*, a plant which is unquestionably in the front rank of the aristocracy of hardy annuals, the large, handsomely-marked flowers, representing hues quite fantastic in character, from a creamy-white to a black-blue and purple. A large bed of this fine annual is always one of the features of Chiswick during summer. The seed is sown in March in the open ground, and all that is needed is a little thinning-out where the plants are thick, and the pulling out of inferior types if they present themselves. During August the bed is a mass of bloom.

—— The old shrubby *Mimulus* (*Diplacus*) *glutinosus*, well-grown, is a fine plant for conservatory or greenhouse decoration. We recently saw, at the Birmingham Botanic Garden, some dense bushes, 3 ft. through or more, which were literally masses of flower. The plants had received nothing beyond ordinary greenhouse treatment, and were turned out-of-doors with other greenhouse plants as early as possible in the summer, being again brought into the positions required when they reached the flowering stage. The Rev. H. N. Ellacombe, of Bitton, states that with him this plant is as hardy as a Fuchsia—*i.e.*, it dies down in the winter and comes up strongly in the spring; plants that have certainly stood out more than ten years have this season flowered well. "I am sure," he adds, "that there are many plants of the same sort that would do very well treated in this way—*i.e.*, as herbaceous plants. *Datura sanguinea* is now in flower; it has stood out a dozen or fifteen years; it dies down every winter, and comes up early, and does not seem to be affected by the spring frosts; treated in this way the flowers and foliage are far finer than usually seen in greenhouses."

—— The *Hollyhock Disease*, produced by the attacks of *Puccinia malvacearum*, has, it appears, been successfully grappled with by Messrs. Downie and Co., of Forest Hill Nursery, by alternate applications of Gishurst Compound and flowers of sulphur. The Gishurst was first applied at the strength of a shilling box to 12 gallons of water, followed the next day or so by a good syringing, and subsequent application of sulphur, through one of Pooley's distributors. These two distinct operations were performed twice a week, the Gishurst being gradually increased in strength to a three-shilling box to 12 gallons of water, which is a very strong dose, and perhaps more powerful than is necessary. In this way a cure was effected, and the plants are now clean and free from the disease, and growing away well, considering the heat and absence of rain.

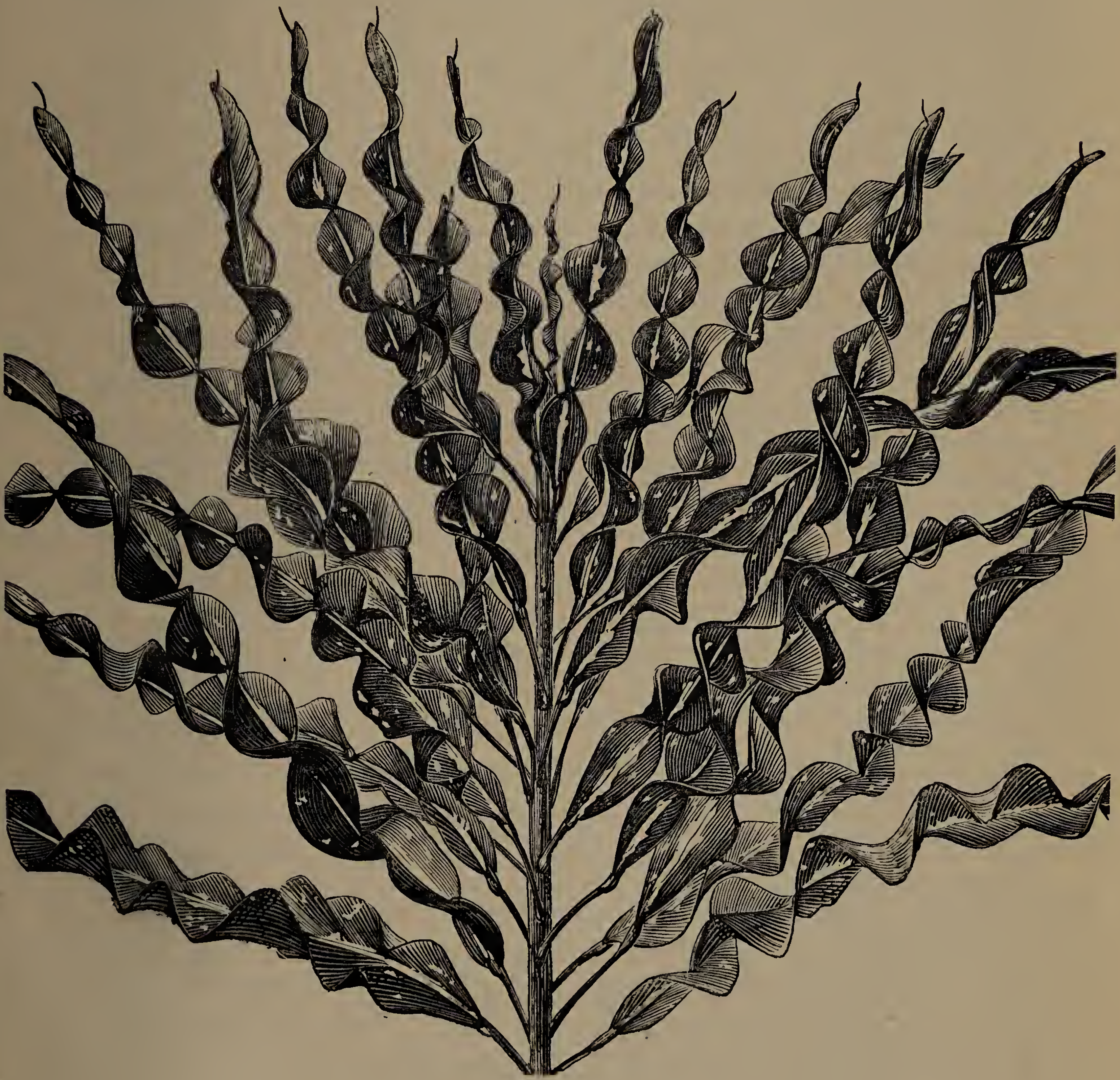
—— We find, in the *Revue Horticole*, the following notes on the *Duration of the Germinating Power of Seeds*. The figures indicate the number of years in each case, in which the seeds may be depended upon as preserving their vitality or power of growth, although in most cases they must not be considered a minimum of limitation. They represent the periods of time after which the various seeds mentioned have been found perfectly good, and may be of some use as a guide to those who are uncertain whether to throw away or sow old packets of seeds:—

Artichoke (globe), 5.
Asparagus, 4.
Basil, 6.
Beans (garden), 6.
Beans (French) 2 to 3.
Beet, 5.
Burnet, 2.
Cabbage, 5.
Cardoon, 7.
Carrot, 4.
Cauliflower, 5.
Celery, 7.
Chervil, 2.
Chicory, 8.
Corn Salad, 4.
Cress (garden), 5.
Cress (water), 4.
Cucumber, 5.
Dandelion, 1.
Egg Plant, 7.
Endive, 8.
Fennel, 6.
Gourd, 5.
Leek, 2.
Lettuce, 5.
Maize, 2.
Melon, 5.
Mustard, 5.
Nasturtium, 5.
Onion, 2 to 3.
Onion (Welsh), 2.
Orach, 1.
Parsnip, 1.
Parsley, 3.
Peas, 4 to 5.
Pepper (long), 4.
Potato, 4.
Purslane, 8.
Radish, 5.
Rampion, 5.
Rhubarb, 3.
Salsify, 2.
Savory, 3.
Scorzonera, 2.
Sorrel, 2.
Spinach, 5.
Spinach (New Zealand), 5.
Strawberry, 8.
Thyme, 2 to 3.
Tomato, 5.
Turnip, 5.

—— The *Maréchal Niel Rose* is so chary of producing its lovely blossoms, except under the conditions of vigorous growth, that any device which can be generally adopted to insure this vigour may be welcomed. Mr. Dunn has effected this at Dalkeith, by budding the plants low on seedling Briers.

—— The beautiful *Orchis maculata* is, it appears, amenable to forcing like the Hyacinth. Messrs. Cocker and Sons, of Aberdeen, obtain annually fair-sized samples of its tuberous roots from Holland; they are potted as soon as they arrive, generally about New Year's Day, and when potted, are put under the stage of a cool greenhouse, where they remain until growth commences, the subsequent treatment being in all respects the same as for Hyacinths. In this way, the *Gardeners' Chronicle* tells us, they grow and flower quite freely.

—— The *Golden Chickweed*, a yellow form of the common *Stellaria graminea*, named *aurea*, is likely to prove a useful bedding plant. It is perfectly hardy, makes a close, low growth, and is very soft in colour. The Golden Feather Pyrethrum has obtained a large share of popularity, especially as a bedding plant; but the Golden Chickweed is held in high favour at some places, and at Battersea, for instance, is considered a more elegant plant than the Pyrethrum for ribbon borders, and is largely used accordingly.



## CROTON SPIRALE.

THIS is one of the New Crotons introduced by Mr. W. Bull, of Chelsea, and was put into commerce in the early part of the present year. It comes from the South-Sea Islands, and is both distinct and effective amongst stove shrubs. The cut, from Mr. Bull's Catalogue, is a very faithful representation of the plant. The spiral twisting, which has suggested the name, is well marked and constant. The leaves are from 9 in. to 12 in. long, and about an inch wide, deep green, with a broad golden bar up the centre, the green margin twisting spirally round the golden bar, and some leaves being partially spiral, partially undulate. When old, the leaves are of a deep bronzy or purplish-green, and the midrib a deep crimson. It is one of the very best of the *Crotons* for decorative purposes, and was awarded a certificate of the First-class by the Royal Horticultural Society.—T. M.

## DOUBLE PRIMROSES.

WE have seen so little of late years of any other than the White, Lilac, and Sulphur varieties of the double *Primula acaulis*, that it was excusable if the belief prevailed that other kinds existed only in the imagination of enthusiastic florists of the old school, or if they had ever possessed a tangible shape, that they had become defunct; but now that a special effort has been made, I am rewarded by a species of floral revival, having obtained a dozen varieties, including some old friends again brought to life, and also some new faces. The members of this family ever were, and ever will be, favourites with those who truly love the lowly denizens of our spring gardens.

In classifying these twelve kinds, I begin at the lightest colour, as presenting a proper starting-point. This is the old Double White, one of the purest of all white flowers, and perhaps the best known of all the double Primroses. In good soil the foliage is large and rounded, and of a light-green colour, the surface being rather uneven. Ordinarily in the open grounds it begins to flower early in March; it is very free, and a robust grower.

The Double Blush is in all respects a duplicate of the White except in colour, as the flowers are deeply tinted with lilac. It is evidently a sport from the White, and is intermediate between that and the following.

The Double Lilac is again almost a duplicate of the White, as there is abundant evidence of its origin as a sport from that kind at some remote period; perhaps it is a trifle less robust in growth, but the characteristic of lessened strength of growth in proportion to depth of colour seems to run all through these Primroses.

The Double Sulphur, or, as it is sometimes termed, the Early Sulphur, is undoubtedly the earliest to bloom of the entire number; it is quite distinct in character, having foliage that is long, narrow, rather glossy, smooth, and somewhat reflexed; the flowers are of a pale sulphur-colour, and are borne very freely.

The yellows, so called, are misnomers—they are rather straw-coloured, or at the best but very pale yellows, but they differ materially from the Sulphur in all respects. Of these there are three distinct kinds. The Late Yellow is a robust-growing kind, having dark green foliage, rough and uneven in appearance; the flowers are extra large and distinct, and have an orange-buff base to each petal. This variety is easily distinguished by the stout rounded form of its flower-buds.

The Giant Yellow has flowers of the same size as the preceding, but just a shade lighter in colour; foliage narrow and pointed, and of moderate growth; blooms freely.

The Giantess Yellow, which was received from Ireland so named, gives the richest yellow hue, and seems to be a sport from the Giant Yellow, to which in all other repects it bears a close resemblance. These three kinds are late bloomers.

Somewhat more rare than the preceding is the Double Salmon, or, as it is called, the Rose. This is a second early bloomer; the flowers are large, full, and freely produced. The colour is really a brownish red, but is quite distinct; the foliage is long and narrow, and rather smooth, and of a distinctive character.

Of a similar type of foliage and habit is the Double Purple, and I believe that these two differ only in colour of flower, that of the latter being, when in full vigour, of a deep rich purple hue, and of a close compact form. It is a very showy variety.

The Scotch Red, like the Sulphur, forms a section by itself, being quite distinct; it blooms very early and freely, and is one of the most acceptable varieties. The foliage is large, rounded, and vigorous, and of a deep green hue, rather rough and uneven. The flowers are purplish red in colour, not so full as those of the preceding kinds, and having an orange-buff base to the centre petals. Occasionally it throws up a short polyanth stem, but this in no way detracts from its beauty and usefulness.

Last, but not least, are the double crimson kinds, of which there appear to be two distinct forms. One I call the BRIGHT CRIMSON; the flowers are of moderate size, full, and richly coloured; the foliage is long rounded at the top, but having long narrow stalks. This kind is well known as "miffy," and requires more than ordinary attention in its cultivation.

The remaining one I call the DEEP CRIMSON, as the flowers are of a deep velvety hue, and the edges of the petals are distinctly marked with minute white specks. My first acquaintance with this beautiful kind was at South Kensington on April 15th last, when a handful of large richly-coloured blooms were shown by Mr. Waterer, of the Knap Hill Nursery, and excited much attention. Since then I have been enabled to secure plants of it from Scotland, and having thus been able to compare it with the Bright Crimson, have concluded that they are two distinct kinds.

Perchance the publication of these notes will lead to the discovery of other kinds not here mentioned, but which may be in the possession of patient, careful collectors in divers parts of the country. Ireland seems to be the most favoured home of the double Primroses, and after that Scotland and the North of England. No doubt the comparatively cool and humid atmosphere that largely pervades those parts of the kingdom, favours their growth, whilst the warm dry summers of the sunny South prove the reverse of encouraging. Under these latter conditions it behoves the possessors of double Primroses to secure for them during the summer months a little shade during the heat of the day, but especially a deeply-stirred and moderately rich soil, into which the roots can descend freely in search of moisture. Specially rare or "miffy" kinds deserve special care, and I find that these are best preserved in pots, which should be plunged in ashes under a north wall or fence. With the common kinds, such as the White or Lilac, I find no difficulty in growing them in the open ground exposed to the full glare of the sun. How far in a deep clayey loam, such as is the soil here, the choicer kinds would thrive under the same conditions remains to be seen, but whilst stocks of them are to be counted by dozens only, instead of by hundreds, I must be discreet, and grow them only where I find for them the conditions apparently most favourable for cultivation.—ALEX. DEAN, *Bedfont.**

# GARDEN WORK FOR SEPTEMBER.

## FLOWERS.

THE recent rains have greatly improved the appearance of our parched flower-gardens, both as regards the growth of the plants, and the verdure of the turf. Flower-gardens being now at their best, the greatest vigilance is necessary to insure the requisite high keeping; for without perfect neatness and order are attained, there always lacks that refinement of aspect which is so pleasing to the cultivated mind, and for which no amount of glitter can compensate. Frequently look over the beds, removing fading blooms, as well as every appearance of decay, and keeping the growth so regulated as to preserve proper proportions and regularity in the outlines of pattern designs. *Clematis Jackmanni* is now flowering in the greatest perfection, presenting masses of rich purple, unapproached in gorgeousness by any other plant, and should have the season of blooming prolonged to the utmost, by repeated soakings of liquid manure; this watering may be also beneficially extended to the roots of all plants that show signs of exhaustion, as well as to foliage plants generally. Divide and replant *Rockets* and other perennials which have been cut back, and are now making fresh growth. Plant in beds, *Carnations*, *Pinks*, *Pansies*, and *Picotees*, when sufficiently rooted, potting up a portion to be wintered in frames. *Hardy Annuals* should now be sown, in a sheltered situation, upon a piece of poor ground made pretty solid. These much neglected and brilliant subjects merit a far greater share of attention than they receive, flowering as they do so early in the season. In addition to those named at p. 189, I would add *Eucharidium grandiflorum*, *Silene*, *Godetia*, *Eutoca*, *Whitlavia*, and *Nemophila,* which are most effective. Transplant *Evergreens* towards the end of the month, and proceed with the propagation of Laurels, and of evergreens in general.

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* Abridged from the *Gardeners' Chronicle.*

*Conservatory:* At present the display here will be kept up with such flowering plants as *Lilium*, *Vallota*, *Fuchsia*, *Lantana*, *Begonia* (of which there are many charming sorts adapted to his purpose), *Statice*, *Tritonia, Pelargonium, Celosia,* &c. Judiciously intermixed with handsome foliage, these are sufficient to make an effective show. Be careful in watering, and moderate in the use of shading, more particularly when many permanent plants are grown in these structures.

*Fuchsias* that have been grown out-of-doors, with the blooms pinched off, should now be placed under cover, and encouraged with manure-water ; the blossoms they now make will stand a long time, and grown thus they are amongst the most effective autumn-blooming plants we have. *Marie Cornelissen*, an old variety, with white corolla, stands remarkably well for late work.

*Chrysanthemums* that are planted out and intended for pots should be lifted during the month, and placed under a north wall, or otherwise shaded for a few days until they get fresh hold, frequently sprinkling with the syringe overhead. Established plants, having filled their pots with roots, should have manure-water at each watering.

*Greenhouses* of all descriptions should have a thorough cleansing, previous to their being refilled with plants, washing the glass and wood-work, so that light is not by any means excluded. Towards the middle of the month everything should be in readiness for placing the great majority of plants under cover, previous to which the pots should be washed, and the plants themselves cleansed from insect-pests. They must be freely ventilated night and day, after they are placed under glass.

*Camellias* that have been standing out should be examined, repotting any plants that are found in a soured condition at the root. The plants generally should have as much air as possible, both night and day, taking care that they are not subjected to sudden checks, which would affect the swelling of the buds. A healthy state of moisture must be maintained at the root, and the foliage kept clean by sponging.

*Stoves:* Plants that have completed their growth should have less water at the root, and be more fully exposed to light and air, so that the wood may be thoroughly hardened. Winter-blooming plants that are now in active growth must be encouraged ; shading will be no longer required for this class of plants, in general. *Poinsettias*, that are fully exposed in pits, must be protected from cold, cutting winds, which would damage the foliage, but otherwise may be exposed until the end of the month. Thin-out superfluous wood upon *Stephanotis* and other climbers that have perfected their growth, keeping them moderately dry at the root.

*Orchids:* All plants that are finishing their growth should be kept drier at the root, reducing atmospheric moisture, lowering the night temperature, and ventilating more fully to induce thorough maturation, for upon this, in a great measure, will depend the soundness of the plants. *Dendrobium nobile*, and *D. moniliforme*, with such as are intended for winter-blooming, should be fully exposed to the sun, so as to induce early maturation; reduce the amount of shading used by degrees.

No time should now be lost in finishing the propagation of *Bedding Plants* in general. *Pelargoniums* that have been rooted in the open ground should be potted, and fully exposed for a few weeks, as hardy stiff plants are much to be preferred to gross sappy stuff for standing the winter; therefore all cuttings that are rooted should be freely exposed so as to engender a sound constitution before winter. *Alternantheras* and other tender plants must be propagated in heat. Such border-plants as *Pentstemons* should now be propagated, as they are most effective subjects for borders, and not nearly enough grown. Put in a good supply of cuttings of *Hydrangeas* for blooming in small pots. Lift and pot *Carnations* that have been grown for early forcing, sprinkling over-head, and shading until re-established. Place a good supply of *Violets* in frames, planting them firmly and rather closely, but not crowding them; also pot a portion, which will come in handy; after planting, water freely, and shade for a day or two until established, but otherwise keep them fully exposed. Roman, and early single *Hyacinths*, &c., should be potted as early as possible; the Roman should be planted in groups according to the size of the pots, an inch apart, as they are only effective when seen in masses; and as a general rule I would recommend all other early sorts to be potted in threes. Re-pot *Lachenalias*, &c.—GEO. WESTLAND, *Witley Court.*

## FRUITS.

*Pines:* Keep a moist night temperature of from 70° to 75° when the fruit is swelling; the day temperature may rise to 90° during sunshine. No growing plants nor those in fruit should at any time suffer from drought. Plants intended for fruiting next season should be potted at once, if not already done (see previous directions). Those intended for fruiting in the spring should have a moderate supply of water and a steady temperature. Pot crowns and suckers, place them in a moist, close pit, and when rooted give them the usual treatment.

*Vines:* A dry atmosphere is requisite for keeping ripe grapes, therefore if there is any damp in the house, a little fire-heat through the *day* would be beneficial, admitting at the same time plenty of air; cut out all decayed berries, and nail gauze over the openings if wasps are troublesome. Remove the sashes, as soon as any of the houses are clear of the crop and the wood is well matured. Pot-vines intended for early forcing next season should now be taken out of the house, and nailed to a warm wall, the pots being covered with litter. They can remain thus till required for forcing.

*Peaches and Nectarines:* Presuming that the trees have all been gone over, and the useless shoots cut out, the lights may now be taken off, if the growth is finished and the wood is ripe; water the borders if dry.

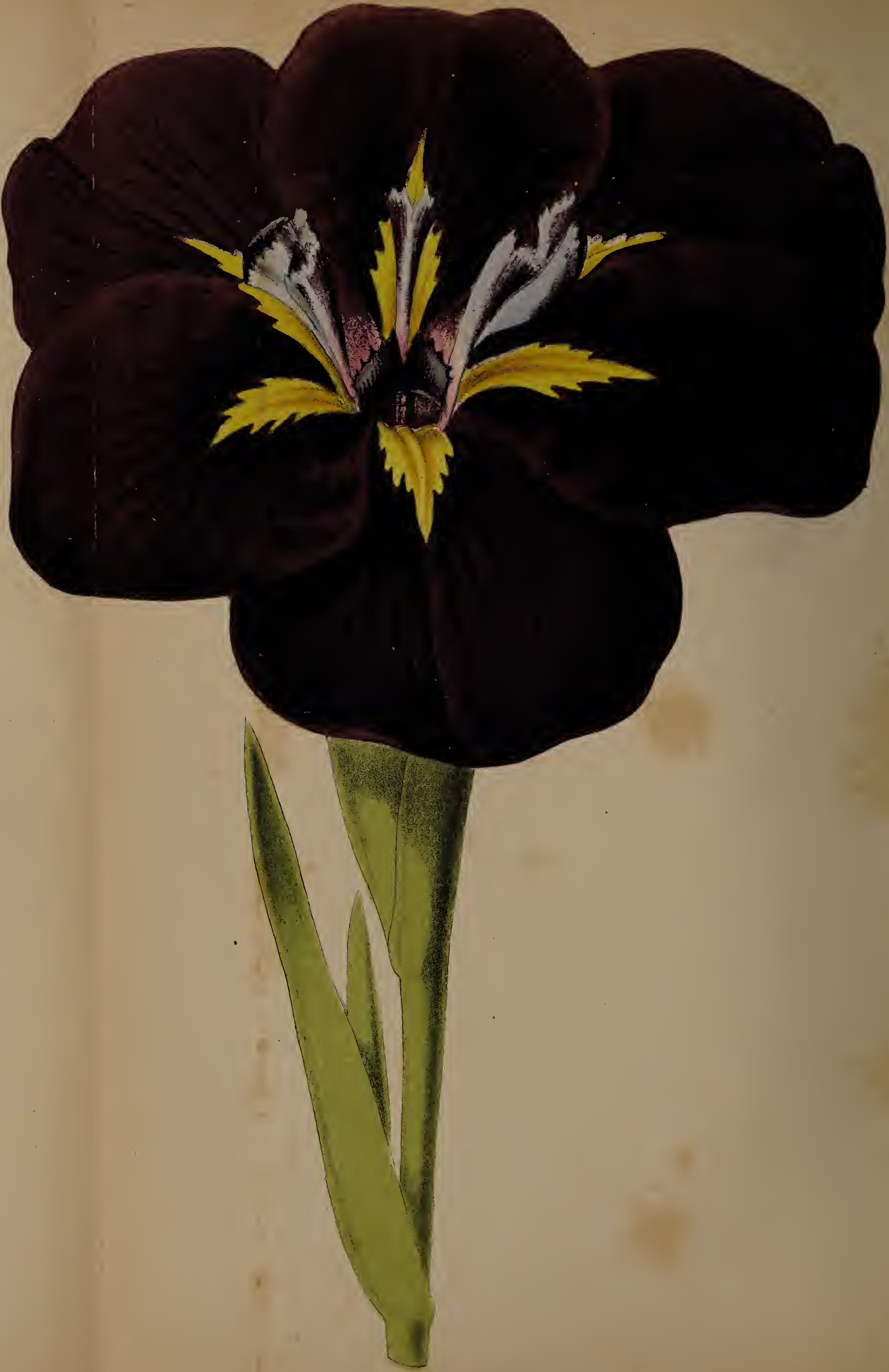
*Strawberries:* These may yet be potted for late forcing; clear away all weeds and runners from those potted last month, and attend to the watering, giving liquid manure occasionally, and placing the pots in a fully exposed situation.

*Melons:* The late crop will not require much water after this time, but a little fire-heat would be beneficial, if it can be conveniently applied, otherwise, make the best use of sun-heat.

*Hardy Fruit:* Late *Peaches* should have a good soaking of water at the root, if the weather continues dry; and the trees should be syringed occasionally till the fruit is ripening; remove a portion of the leaves that cover the fruit, so that it may have full exposure to the sun. As soon as any of the trees of the earlier kinds are clear of the crop, remove the dead leaves and cut away useless shoots, which will help to ripen the wood and mature the fruit-buds for another season. Protect late *Plums* with tiffany, or other light material, to preserve them from wasps and flies, also *Morello* and late *Duke Cherries*, for use through the autumn. Continue to trap all kinds of insects that are likely to be troublesome to the wall-fruit. Cut out the old canes of *Raspberries*, and tie up the bearing shoots of the autumn-bearing varieties; water with liquid manure in dry weather. Continue to clear *Strawberry*-beds from weeds and runners, dress with rotten manure, and fork the ground between the plants. This is a good time to make new plantations. Look over early *Pears*, and watch their ripening. The generality of *early* Pears require gathering before they are ripe, for if allowed to ripen on the tree the flavour will be greatly deteriorated, and the flesh become dry and spongy. Early dessert Apples are best gathered from the tree as they are required for use. —J. POWELL, *Frogmore.*

## VEGETABLES.

There will not be much to do in this department this month, besides harvesting the crops, and a resort to the usual means for the destruction of weeds, which grow so freely at this season, and which, owing to the longer damp nights, the somewhat less sun, and perhaps more rain, are more difficult to keep down between growing crops. *Spinach*, which should now be well up, and commencing to leaf freely, must be thinned out where too thick, and be well hoed through occasionally; few crops prosper better with the soil freely moved around them than this. Harvest *Onions*, taking care that they are thoroughly dry before being placed in their winter quarters. Where proper convenience exists, there is no better plan than that of taking the crop bodily, and laying it in basketfuls, upon the floor of an open airy shed, as when once they are taken up, they are the better for not having the more rain fall on them. *Cauliflower plants*, the produce of seeds, sown during the past month, should be pricked out into nursery-beds, as soon as large enough, that they may be imbued with hardihood, the better to withstand the winter cold. We particularly advise that all *Potatos* still remaining in the ground should be taken up at once, for it is an absolute loss to leave them too long in the ground. *Tomatos* that are late, and now show little signs of colouring, should have every young shoot pinched back, and a few of the older leaves which unduly shade or overhang the fruits removed. Another crop of *Herbs* might be harvested, by cutting down the young growths which are made, and drying them carefully in an open shed, and not too quickly. Even where it may not be desirable to dry any more, it will be judicious to cut down again to the ground-line such herbs as *Balm*, *Sorrel*, *Fennel*, and the like, that a shorter stiff growth be formed, one more likely to afford a supply later in the winter than such growth as now exists will do. Continue the earthing-up of *Celery*, according to the stage at which it has arrived; always choose a dry day for doing this, and do not bank up too much soil at one time, but rather carry out the process gradually, so that each row may have about four or five earthings-up. Transplant winter *Lettuces* and *Endives* as often as plants raised from successional sowings become large enough for the purpose; in transplanting them, dibble them somewhat deeper into the ground than is customary for spring or summer crops; they will the better withstand the ill-effects of frost in consequence. The permanent plantation of *Cabbages* must be made, for the earlier spring supply, as soon as the plants sown last month are large enough. Upon light soil, the old Onion-bed used without digging it up will, if well hoed and cleaned, be the best possible place for them.—WILLIAM EARLEY, *Valentines.*



W H Fitch del.

IRIS [illegible] HENDERSON

# IRIS KÆMPFERI EDWARD GEORGE HENDERSON.

WITH AN ILLUSTRATION.

UNDOUBTEDLY in this so-called double form of Japanese Iris, we have one of the most remarkable flowers to be found in our gardens. *Iris Kæmpferi* is a Japanese plant, introduced by Siebold, and is so closely allied to *I. lævigata*, that it may be regarded as either identical with or a variety of that species. Many fine varieties exist, both in the Dutch nurseries and in those of this country, but ordinarily the flowers have the usual ternary composition which is familiar in other species of the genus. In the present form, which bears the name of EDWARD GEORGE HENDERSON, and in some others to which the term "double" is applied, the broad spreading floral segments are duplicated, so that, being six instead of three, a large round full flower is produced, which is scarcely at first recognisable as that of an Iris. The rich purple colour, too, makes it in this case very striking in appearance, and remarkably showy in character.

We are indebted to Messrs. E. G. Henderson and Son, of the Wellington-Road Nursery, St. John's Wood, for the opportunity of figuring this plant, which was shown in fine condition at the meeting of the Royal Horticultural Society, held on July 1st, when a First-class Certificate was awarded to it. As a garden flower, few plants can vie with this novel form of Iris, which, in the size of its blossoms and their deep purple colour, may be compared (as was actually the case) with the well-known Clematis Jackmanni; but instead of being wholly purple, each of the segments is lighted up towards the base with a bold flame of rich golden yellow. This combination of deep violet-purple and gold gives a remarkably rich appearance to the flowers. The plant is rather tall and spare, and the usual sword-shaped leaves somewhat narrow, but these peculiarities are abundantly compensated by the size and individual beauty of the blossoms.

In reference to the structure of this remarkable flower, we quote the following passages from an article in the *Gardeners' Chronicle* (1874, ii., 45), where a woodcut illustration is given :—

"It is surprising to see how many persons are capable of recognising beauty of form and colour, and yet do not perceive that higher beauty—beauty of purpose and adaptation. They see a botanist picking a flower to pieces, and they think it little less than sacrilege. They laugh at his 'barbarous binomials' and uncouth expressions, but they do not realise all the time that he has, what they have not, a keen sense of delight in reverently tracing, so far as his faculties permit, the purpose and plan of the Creator, as manifested in the humblest weed.

"To the arrangement of the floral segments in the variety of *Iris* called by the name of *Edward George Henderson*, we may, therefore, briefly allude, as it is of considerable interest, both from the florist's and from the botanist's point of view.

"In Irises in general we have the flower composed of six coloured segments, three outer ones bent downwards, three inner ones somewhat smaller, often different in colour, and ascending to arch over the central organs of the flowers. Within these segments of the perianth are three stamens, concealed by three large petal-like styles, and generally not visible till these are turned aside or removed. The ovary, or young seed-vessel, is below the flower segments, as in Narcissus, Orchids, &c.

"In the Iris of which we are now speaking the arrangement is different—the three outer segments are flat and spread horizontally, and the three inner ones are of similar form, colour, and direction. The result of this is, a flat flower of nearly circular outline, such as rejoices the eye of the lover of the so-called 'florist's flowers.' More than this, the three stamens concealed between the outer floral segments and the petal-like styles, show a tendency to emulate the styles, and themselves become petal-like, and the way in which they do this is also noteworthy. An ordinary Iris stamen consists of a filament or stalk, on the upper part of which is, on either side, an anther-cell containing the pollen; the two anther-cells are separated one from the other by what is called the connective, which is in this case nothing but the direct continuation of the filament. In the flowers before us the summit of the anther is surmounted by a trumpet-like tube, coloured purple, and divided into three lobes at the free edge. Tracing these lobes downwards, it may be seen that two of the three are directly continuous with the anther-lobes, while the third is similarly a petal-like prolongation of the 'connective.' In addition to these three stamens, which (apart from their slight tendency to assume a petal-like condition) perfectly represent the ordinary stamens of an Iris, there are, in the variety before us, three additional stamens opposite to the petals, but these supernumerary organs are almost entirely petal-like, and correspondingly unlike anthers. The styles and ovary present nothing materially different from the usual structure of Iris flowers.

"To sum up, then, we may say in brief that while an ordinary Iris has an irregular flower, this variety has a regular one; an ordinary Iris has three stamens, not petal-like, this variety has six stamens, in two rows, and all are more or less petal-like. Technically speaking, this flower affords an example of that form of peloria called regular peloria, and of the increased number and petal-like development of the stamens. Florists, however, will be more concerned with the fact that they have here a flower of circular outline, regularity of proportion, and marked tendency to become double."—T. M.

## NECTARINE PRINCE OF WALES.

THE finest September Nectarine I have gathered, or seen, this season, is the variety known as Prince of Wales. The crop is heavy, and the fruit large, averaging about 7 in. in circumference, but many of the fruit being quite 8 in. round. In the matter of growth, robustness, and free-cropping, the young tree here, as compared with others planted three years since, has greatly the advantage; whilst as to quality, the fruit are, for the season, to be very favourably compared with the best of the standard kinds, being of a refreshingly sweet and vinous flavour. It has one other peculiarity—the wasps, &c., do not seem to attack it as they have done all other kinds, with unwonted constancy this season. Altogether I must heartily recommend this variety to all intending purchasers.—William Earley, *Valentines.*

## THE GOLDEN CHAMPION GRAPE.

THE prospects of this fine grape seem to be looking brighter of late, a goodly number of samples having been exhibited during the present season. One lot, however, particularly worthy of notice, consisted of three bunches exhibited lately at Banbury, by Mr. Finlay, gardener to Colonel North, of Wroxton Abbey. The bunches were large and handsome, and the berries very fine; there was not a single spot observable. The heaviest bunch weighed $5\frac{1}{4}$ lb., and the three together could not be less than 14 lb. Three berries which were plucked off were found to weigh $2\frac{3}{4}$ oz.

The remarks of a contemporary last year showed that the examples then shown by Mr. Finlay, at Banbury, were of excellent quality, and judging from the vigour and firmness of the growth of the vines, I have no doubt but fine grapes will be produced for some time to come.

When Mr. Finlay started to grow this vine, his success was of but a moderate character; it was then cultivated on its own roots, but it was afterwards inarched on a Black Hamburg, and the result has been thoroughly satisfactory, since it has produced crops fine in appearance, as well as of excellent quality. I also observed at Banbury, among other creditable productions, excellent bunches of that well-abused grape, Madresfield Court. The berries were large, and black as jet, with a dense coating of bloom on them. These also were from Wroxton Abbey.—M. Temple, *Blenheim.*

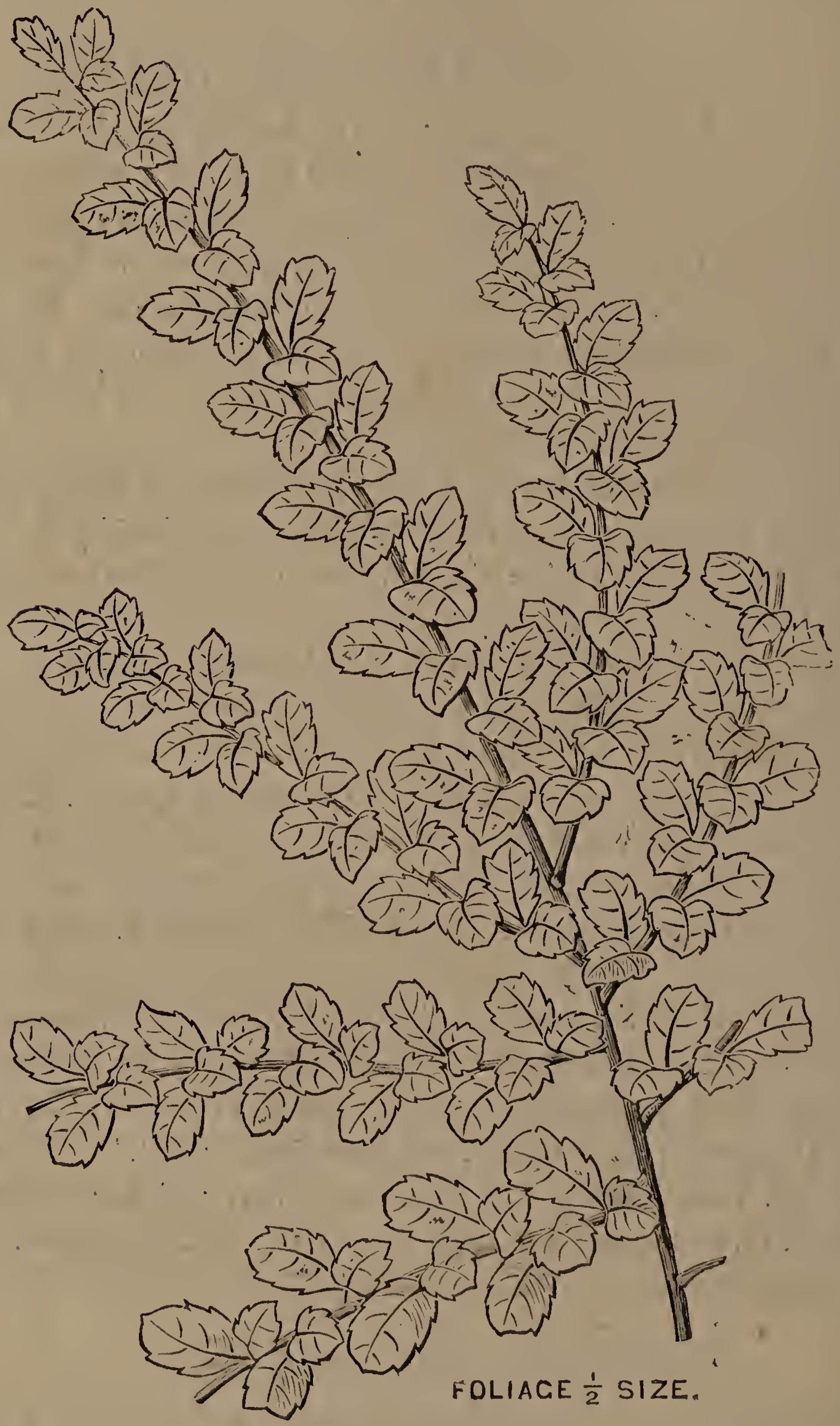
[A correspondent of the *Gardeners' Chronicle* has stated recently that the Golden Champion Grape is being done well this season by Mr. Vickery, Woodend, near Chichester. This gentleman has fifteen bunches upon a rod, all of moderate size, ripened to a good golden colour, and free from "spot." To assist them in ripening off, Mr. Vickery keeps the house very dry, and has half-severed each fruiting lateral, to, as he says, limit the flow of sap to the bunches. The result is good, to whatever cause attributable.—Ed.]

## AZARA MICROPHYLLA.

ONE of the neatest of evergreen shrubs known, and one which will be most welcome in our gardens, as it is nearly or quite hardy in our climate, is the above-named *Azara.* It has, in fact, stood out unharmed for the past five years at Coombe Wood, in Surrey, where it is cultivated by the Messrs. Veitch and Sons, of Chelsea, to whom we are indebted for the figures.

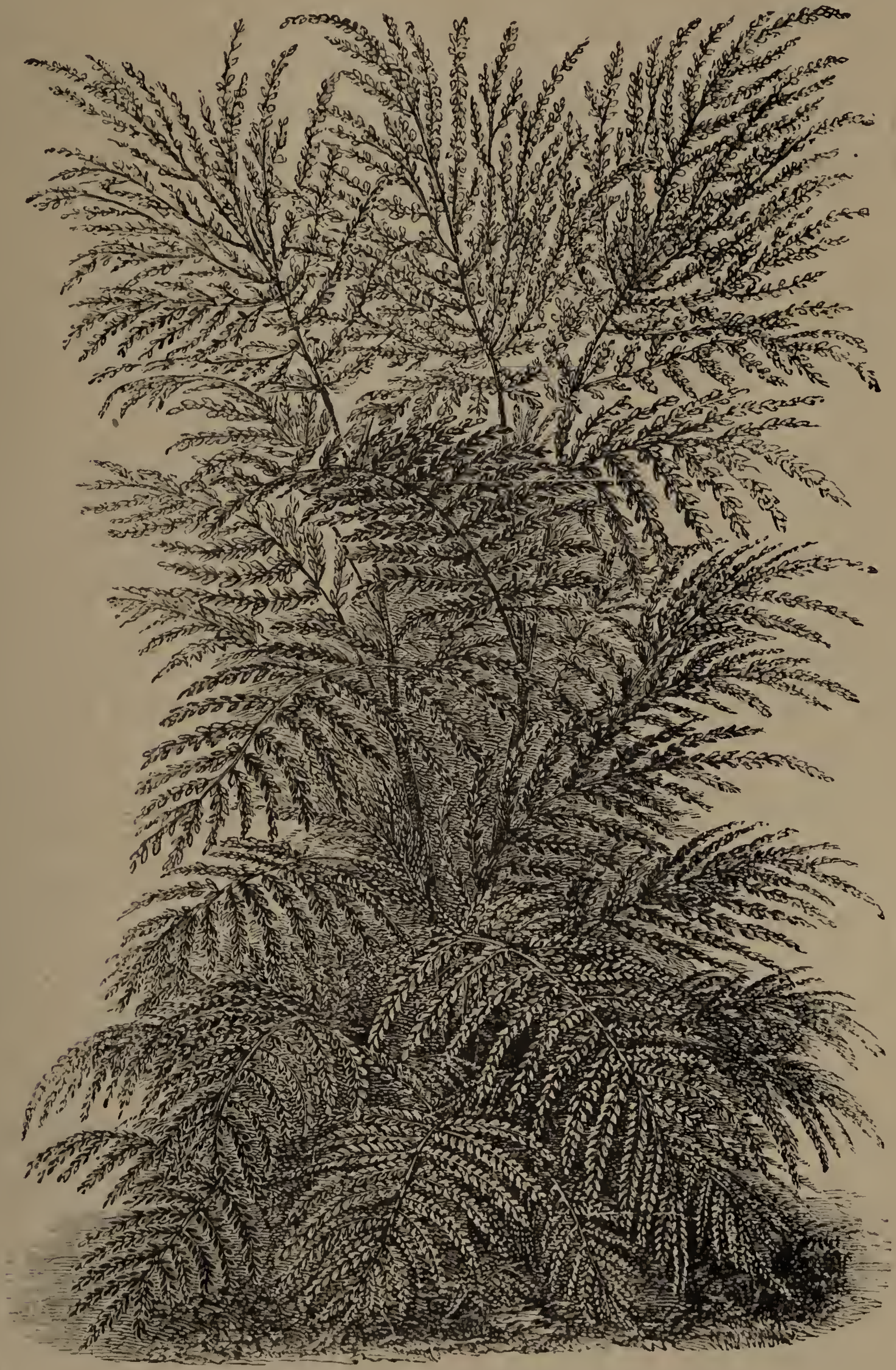
The *Azara microphylla* is a native of Valdivia, where it is found at an elevation of 3,000 ft. It has received a First-class Certificate from the Royal Horticultural

Society, and is undoubtedly one of the best plants of the hardy class which has been introduced of late years. It is of shrubby habit, growing 8 ft. or 10 ft. high, with spreading and drooping branches, which have a peculiar fan-shaped mode of development, exactly adapting them for training against walls. The foliage is exceedingly neat, but dense, of a dark shining green, and a bluntly ovate figure, the margins being toothed. The flowers are inconspicuous, so that the beauty of the plant must be sought in its densely-set glossy foliage.


FOLIAGE ½ SIZE.

AZARA MICROPHYLLA.

We know of no plant which could be more appropriately introduced to cover a wall, where a neat clothing is required, than this *Azara*, and there is little doubt, from the experience gained at Coombe Wood, that in such sheltered positions it would prove hardy in most parts of the country.—T. M.



AZARA MICROPHYLLA, showing the habit of the plant.

## HAUSSMANNIA JUCUNDA.

VERY appropriately this plant, which was named by Dr. von Mueller, in honour of M. le Baron Haussmann, the renovator of Paris, flowered for the first time in Europe, in one of the plant-houses of the Fleuriste de la Ville de Paris, at La Muette, an establishment which, in great measure, owes its fame to his countenance and material support, This plant, which is one of the *Bignoniaceæ*, is a native of Australia, where it would appear to be extremely rare. It is a climber, of vigorous habit, with persistent trifoliate leaves, having very broad coriaceous subelliptic leaflets. The flowers grow in small subumbellate heads, and are tubular, wine-red in the lower, yellow in the upper part, the slightly projecting stamens being terminated by roundish anthers. According to the French cultivators, the plant is increased with the greatest facility by means of cuttings.—M.

## LISIANTHUS RUSSELLIANUS.

I HAVE read with much interest Mr. Douglas's remarks on this beautiful and useful autumn-flowering plant, one which is not often seen; and I trust they may lead to its more general cultivation. May I be allowed to explain a mode of culture most successfully followed out for the last twenty-five years, to my knowledge, by an amateur cultivator named Webber, at Exmouth, and who has about as well kept a garden for every day in the year as I have ever seen, being gay inside and out at all seasons. He has a greenhouse and a two-light pit only for propagation and growing on his stock for all purposes, and nowhere is there to be seen a dead leaf or decayed flower. In this garden there may have been seen, since the middle of July, and there may be seen now (September 16), numbers of the lovely *Lisianthus Russellianus* in the greatest beauty and perfection, with hundreds of dark purple or mauve-coloured tulip-shaped flowers, and which are the admiration and surprise of hundreds of passing people,—for every one who walks or rides along the public road can see them through his garden pallisading. The unusual colour at this season, and the thicket of flowers, seem to catch the eye of all passers-by. My object is to explain Mr. Webber's successful practice in the culture of this plant, by the means he has at hand, for the benefit of those who have not the command of heated structures and better conveniences.

To begin with, Mr. Webber clears his little two-light pit of all plants in spring, turns out the decayed materials, and places inside again about 2 ft. or 2 ft. 6 in. of well-wrought fermenting material, in order to command a little bottom-heat, to strike his cuttings, and to raise his tender annuals. On to this gentle heat is placed the *Lisianthus* seed, sown on light, open, sweet soil, and very lightly covered with sand, a bell-glass or piece of glass being put over the pot. As soon as the plants are up, and can be handled, they are taken up with a little flat bit of stick, and pricked out in the same sweet, open kind of soil, being kept in the same pit to be grown on. Others are pricked out as they appear, and are treated likewise. As soon as the plants have grown a bit, they are potted into 60-sized pots, each having been taken up with a little flat sharp stick, and conveyed to the pot with its little ball of earth carefully—for it is the attention to little matters throughout that commands success in the end. The fermenting materials have by this time become exhausted and sunk down. A temporary stage was formed close to the glass with a few bricks and slips of boards, and on this they are now placed in saucers, the reason being that they are never watered on the surface of the soil, but tepid water is always applied to the saucers. If the surface of the soil late in autumn and through the winter is watered, the plants are very liable to shrink off or canker at the surface, and that, too, very suddenly.

By the end of September the greenhouse is cleared out, and re-arranged with winter plants, when the warmest, lightest, and most sheltered place on the front shelf is chosen for the *Lisianthus* plants, which are there placed in pans until the following spring, when they get a good shift, and are replaced on the prepared cutting-bed, now again got in readiness with its fermenting materials. By the time most of the cuttings, &c., are removed, the young plants are ready for their final shift, and get more room till they begin to show bloom-buds, when they are again placed on the front greenhouse shelf to bloom.

Clean pots are always chosen, and the pots are at all times kept clean. They are drained fully one-quarter of their depth with broken sherds; and the soil is healthy, sweet, well-pulverised, tolerably light and rich, being composed of such as well-decomposed leaf-mould, heath-soil, or light turfy loam, adding a portion of well-decomposed cow-dung, and always making use of clean, well-washed, sharp sand, enough to keep all open, sweet, and porous. In their full growing season, the plants may be watered with good clear liquid manure—never applying the water cold, or from autumn to spring, on the surface of the soil.

If these simple instructions are attended to, success will be the reward, and a glorious sight the result. The plants may be grown to any desired size, with the convenience of heat and room and large shifts. Mr. Webber's are finished off in 10-in. and 12-in. pots, and are noble, healthy plants, with from three score to four score or more open flowers on each plant,—a lovely sight.—James Barnes, *Exmouth.*

## HOT-WATER TREATMENT FOR CACTI.

"So you are really going to do it," I exclaimed, as she came in with the tea-kettle. "I should think you would be afraid; I know you'll kill them, and it's too bad, after having them so long. Let me see, it must be ten years since you started the slips." "Yes, almost eleven, and I'm tired of seeing them around. I've threatened these three years to throw them out, and now I'll give them just one more trial. If it kills them, I don't care;" and the steaming kettle seemed to sing the words after her in a spiteful way, "I don't care! I don't care!"

It was all about two inoffensive plants, standing in pots on the window-shelf. They were species of Cacti, one a Snake Cactus, and the other a beautiful large pink flower; but Aunt Ruth did not know. Neither of the plants had ever blossomed, and after these many years she had resolved to give them up as not worth the room they occupied.

"I've tried everything but this," Aunt Ruth went on, still holding the kettle with the spout resting on the sitting-room stove. "I've let them get as dry as ashes in the winter, never putting on a drop of water from fall to spring, I've changed and changed them to smaller pots, till I'm tired of it, and not a flower have I had for my pains. I'll try this last thing, and if that don't do"—she finished the sentence by taking the tea-kettle to the window, and pouring the smoking contents in the pots. A neighbour had been in an hour before, and said she knew of a Cactus that flowered immediately after being treated in this way. Let the earth get perfectly dry, then pour on boiling water, and the plants will throw out buds in a few days.

We watched our scalded friends, to see them wilt down, but we were disappointed in our expectations. After a good many days we discovered—what do you think? Little red dots all over the Snake Cactus, and round buds occasionally scattered over the other. And now—well, I've only one more thing to say—you should see the glory with which our little shelf is filled.—F. A. B.

⁂ The above curious dialogue, from the American *Horticulturist*, appeared originally in the *Rural New Yorker.*

## VINES AND VINE-CULTURE.—Chapter V.

### Pruning and Training.

IN continuation of my remarks on the winter pruning and training of the Vine—that is, of the ripened wood of the plant—let me suppose the Vine to have completed its second season's growth, and to be in good order for pruning. If it has grown well, there should now be some four or five shoots on either side of the main rod or stem left at the previous pruning, with a corresponding continuation of the main stem itself, to 10 ft. or 20 ft. or more, as might be allowed. These side-shoots have then to be pruned; by doing this we form the first spurs, and according as we do this, do we lay the foundation of good or bad spurs for all time to come. It is well, therefore, for the sake of future appearances, to give a little care and attention to the matter at this stage. As already stated, with well-ripened wood there need be little fear of losing a crop of fruit through too close pruning. The bud or eye situate close to the stem, although not so large and conspicuous as the others further off, will produce as strong a shoot as they, and as good a bunch of fruit, or nearly so. Besides, close pruning has the advantage, especially in the present case of first pruning, of keeping the spurs close at home. Fig. 3 may be taken to represent a portion of the main stem of the second season's growth, showing the formation of the first spur. A is a spur properly pruned and formed; B is a spur of far more pretending appearance, such as the timid and uninitiated always leave. It is, however, wrong, and should be cut off as shown by the cross line *a b*. Some cultivators recommend leaving long spurs at pruning-time, so as to have a choice of buds at disbudding-time, intending then to rub off the front one; but this system is pernicious, as the upper bud is sure to break the strongest, and to allow it to break, and then to rub it off, is a sheer waste of force.

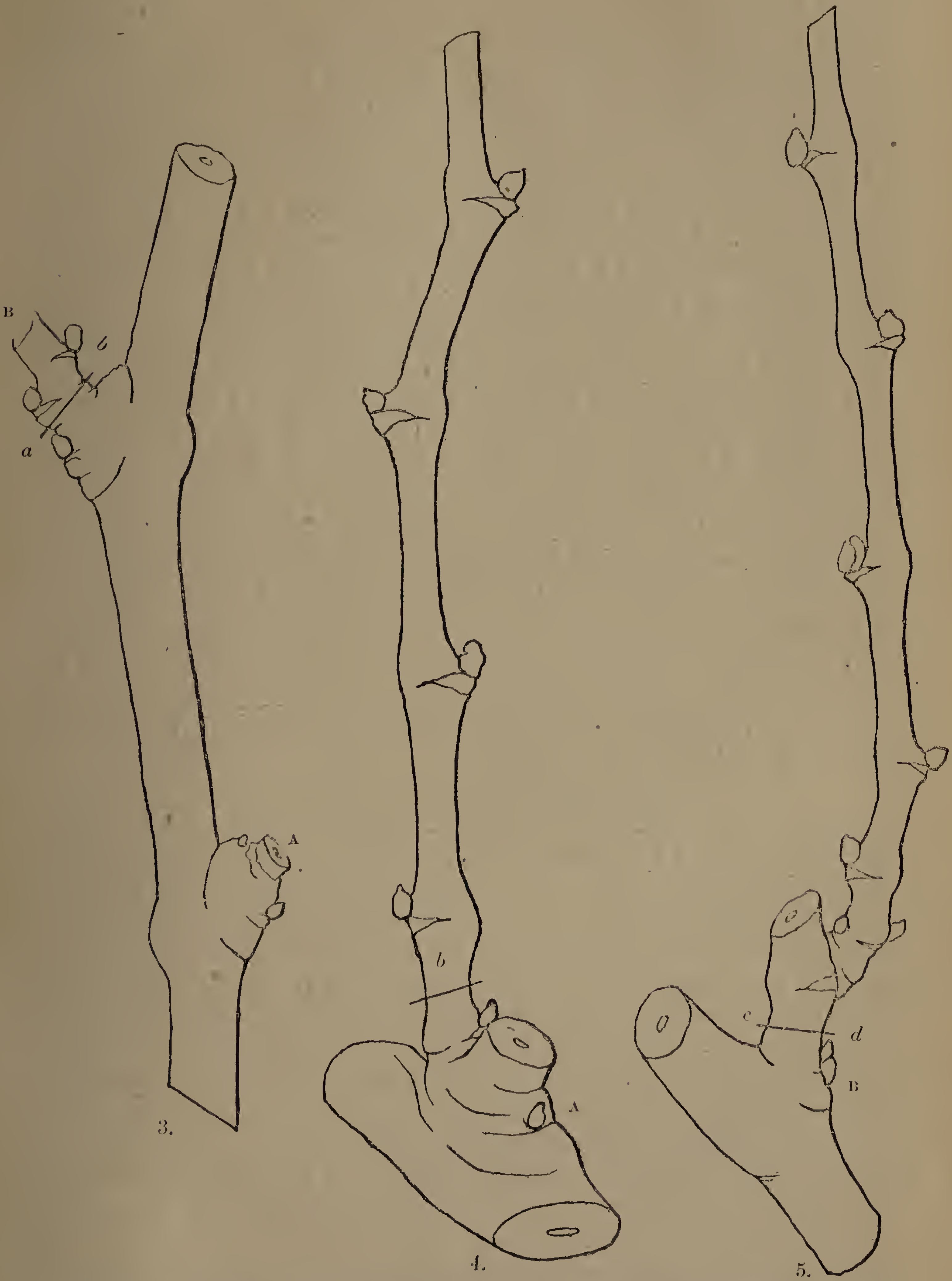


FIG. 3.—YOUNG VINE STEM, portion of second season's growth. 4.—VINE SHOOT OF THE THIRD SEASON, from properly pruned spur. 5.—VINE SHOOT OF THE THIRD SEASON, from improperly pruned spur.

As regards the main stem or rod, the same considerations as to its pruning have to be applied as in the previous season. Cut off all the side summer laterals;

do not depend on any of them for permanent work. Then head the stem back to, say 4 ft. or 6 ft. of new wood, according to its strength. A good stem should be about the thickness of one's thumb, and a weak one of the thickness of an ordinary black-lead pencil. If the main stem resembles the latter, it should be headed back quite close, as it would be too weak to produce good side-spurs, or to bear good fruit.

Fig. 4 represents the growth from spur A of Fig. 3 ; and Fig. 5 that of the spur B, at the end of the third season. The properly pruned spur A has produced the properly placed shoot *b*, which should be now pruned as shown by the cross line, thus forming a close compact spur, which may subsequently be pruned for years after the same manner, with little apparent enlargement. The improperly pruned spur B of the previous season, it will be observed, is infinitely worse now. The shoot produced is equal to that of A, but the point bud having been left, the spur is now, not only unsightly, but permanently weakened. It should have been pruned at the lower cross line, but now that cannot well be done. To continue the same system of pruning, the cut would have to be made at the cross line *c d*. This shows clearly to what an indefinite length the spurs pruned in this manner would attain in a few years' time. In the course of eight or ten years each spur would be from 4 in. to 6 in. in length, and this on each side of the vine, which would give 12 in. of wasted empty space, besides the extra amount of energy expended by the plant in producing sap to annually clothe these long ragged spurs. For the well-being of the plant, therefore, in an economical point of view, no less than for its neater appearance, it is better to prune so as to have short close spurs.—A. F. Barron.

## TASTING FRUIT AT SHOWS.

THIS practice is still very common, when judging fruits at provincial shows, and it is really done more to please exhibitors, than to arrive at the true merits of the produce. To say which lot has the finest flavour out of twenty dishes of Plums, or as many dishes of Peaches, after trying to arrive at just conclusions by tasting, is simply absurd. Then, suppose a dozen fruits to be shown in each dish, how could the merits be arrived at by simply tasting one ? I never find that one or two represents the quality of the whole dish ; some being dead-ripe, while others are unfit to eat. Yet the system of making the exhibition-tables look disgusting by a mass of mutilated fruit is quite common at provincial exhibitions. Often before the day is at a close, it is a putrid mass, and instead of showing what first-rate examples should be, the whole character of the fruit is destroyed. Surely, if exhibitors in general knew how little they gain by the practice, and how much they lose, such a rule as cutting stone-fruit would never be tolerated. It is, moreover, common for judges to cut up lots of the fruit after the decision has been made, simply to please exhibitors, and to let them feel assured that their produce has been noticed.

Another argument may be urged against this absurd practice. We seldom meet two judges whose opinions are alike in regard to flavour. Some prefer everything to be sugary, whether it may be the correct flavour or not. Sugar is only one portion of the substance of any fruit, and where that predominates to a very great extent, the fruit becomes nauseating to experienced palates. The same may be said of Grape-tasting. We observe that the custom is in full force at many country shows still. By experienced judges a berry is "judiciously" picked from the portion of the bunch next the "board" on which it lies. If the bunch has shoulders of any size, it will be found that at the points of the shoulders the fruit invariably is more acid and altogether different from the top of the bunch. Such has always been my experience, especially during the past season. It always has appeared to me that Melons are the only fruit which one can judge of with anything like correctness by flavour. At a recent exhibition, we tried to give an opinion by colour, fine smell, and a handsome exterior, before we cut any of the fruit. The result was that we fell lamentably short of the mark. When the fruits were cut, it was found that handsome Melons, with what might be called a "delicious perfume," were totally unfit to eat, while others which had a plain exterior, were deep in the flesh, thin in the skin, and had scarcely any smell, were excellent. Among that class were *Golden Perfection* and *Tilly's Queen*. An argument for cutting Melons is that we often find green-fleshed kinds exhibited among scarlet-fleshed varieties, and *vice versa*.—M. TEMPLE, *Blenheim*.

## CHOICE HOTHOUSE CLIMBERS.

CLIMBERS stand somewhat in the same relation to a plant-house, as the trappings of an upholsterer to a drawing-room; they are each necessary as a means of covering bare surfaces, and in fact, of imparting a furnished appearance to the apartment. We mention here a few which are well suited for Hothouse-culture:—

The magnificent PASSIFLORA PRINCEPS, though so free to afford its racemes of finely-coloured flowers, and so much better than any other Passion-flower, from its long continuity of bloom, is scarce, compared with what it ought to be. The flowers are splendid for indoor decoration on a large scale, and drooping over the edge of vases, large baskets, &c., have a fine effect. It enjoys a brisk heat, and to be trained rather near the light. Planted carefully, in good soil, under the front bench of a stove, with a front passage, and trained along in graceful wreaths, so that the flowers hang down over the front bench, it has an exquisite and original effect. It might also be trained in the form of larger wreaths higher up, but with their points as near the glass as could well be managed.

BIGNONIA VENUSTA is also a magnificent stove-plant when grown firmly but freely near the light, and allowed to descend from wires a foot or two above the walking-spaces of the passages in the stove. Its rich dark orange flowers are of a high order of beauty. Like the preceding, it is most easily obtained, but not half so often seen as it should be.

Ipomœa Horsfalliæ is a grand old plant, now seldom seen in a good condition in gardens, but of the highest value from the exquisite richness of its colour, and the great facility with which it produces its blossoms at nearly all seasons, flowering freely at Christmas on the roof of the stove. It only requires to be kept clean, and cut back here and there occasionally, to induce the production of flowers near the old wood, and is fond of a nice brisk and moist heat. Nothing will better repay attention. It may sometimes be seen in a very wretched condition from being kept in too dry a heat, and from being devoured with red-spider. It should be kept in a pot or planted in a nice little compartment in the stove.

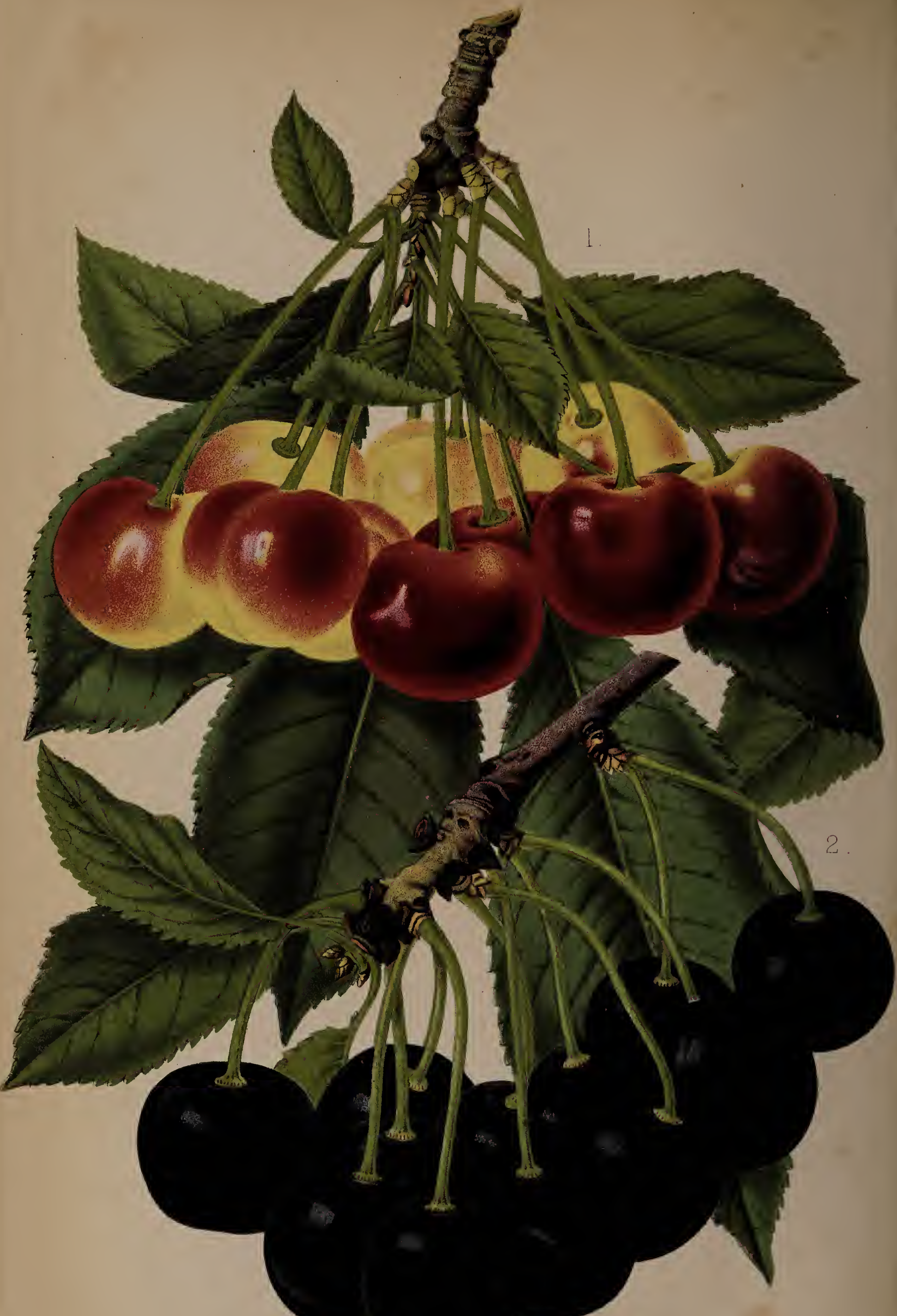
Ipomœa bona-nox is a plant of marvellous beauty when well and cleanly grown in a stove, and that may be done without trouble, and even without the choice of a good position. Plant it out and train it along a wire in any part of the stove; keep it clean by gentle and repeated syringings, the best of all methods for keeping stove plants nice and fresh, and wait for the result, which will appear in the form of very large white flowers banded with pale green outside, and of the most exquisite fragrance. It is especially valuable to the gardener from opening at night, as he can then cut it and send it into the drawing-room, where a single flower placed in a slender glass will diffuse the most exquisite perfume through the room. An occasional rarity such as this could not but be appreciated.—T. M.

## THE ŒNOTHERA.

THIS is a very showy family of plants, well adapted for the embellishment of rockeries, borders, &c., since they will grow in any ordinary garden soil. Among the hardy perennial species *Œ. macrocarpa* is a well-known kind; it was formerly to be seen in most of the old-fashioned flower-gardens, and not unfrequently occupying the centre of a round bed, but latterly this and many of the other kinds have become scarce in gardens. Now that the taste for plants of this description is reviving, the *Œnotheras* should be more sought after, and receive that attention and cultivation which so many of the species are deserving of. The perennial species are readily increased by dividing the roots, by cuttings, and by seeds. The annual and biennial kinds merely require to be sown in the open border.—M. Saul, *Stourton.*

## BEDDING VIOLAS.

PERMIT me to give, by way of addenda to my previous remarks, the name of a late introduction in the way of bedding Violas, which has, during the latter part of this summer, proved itself one of rare excellence. I refer to the variety named *Blue Bell.* The depth of colour, the effect of which is most telling far and near, and the constancy with which it blooms, will make this one of the most popular of its class, and one that may be trusted not to disappoint the purchaser. At Chiswick, in the hands of Mr. Barron, this variety has been quite a feature this season.—William Earley, *Valentines.*



J.L. Macfarlane, del.

Chromo G Severeyns Brussels.

Cherries.

1, Frogmore Late Bigarreau. 2 Joc-o-sot.

# DESSERT CHERRIES.

WITH AN ILLUSTRATION.

IN the accompanying plate, we give illustrations of two fine varieties of Dessert Cherries, which are not so widely known as their merits deserve. The Frogmore Late Bigarreau (fig. 1.) is represented from specimens obligingly communicated by Mr. Jones, from the Royal Gardens. It is a seedling raised at Frogmore by the late Mr. T. Ingram, and like the Early Frogmore Bigarreau, figured on a former occasion, is a fruit of great excellence. Mr. Powell, in a note dated July 9, writes :—"We find it a very useful variety. It is not yet ripe, and will hang a long time on the tree without cracking,—a great fault in the old variety." The fruit is large, bluntly heart-shaped, with a slight suture. Skin pale waxy-yellow, covered with bright red on the sunny side. Stalk two to two and a half inches long. Flesh tender and juicy. Quality quite first-rate.

The Joc-o-sot (fig. 2) was obligingly communicated by Messrs. Rivers and Son, of Sawbridgeworth, during the past summer. It is a very rich-looking, luscious fruit, and the quality is equal to its appearance. The fruit is full-sized, bluntly heart-shaped, compressed at the sides, and indented at the apex. The stalk is about an inch and a half long, or according to Hogg, two inches. The skin is shiny, and very dark purple, almost black. The rich, sweet flesh is dark-coloured, very tender and juicy. The variety is in season about the middle of July. The Joc-o-sot, according to Dr. Hogg's classification, belongs to the group of Black Geans.—T. M.

# FRANCISCEA EXIMIA.

THIS *Franciscea* is a valuable plant for decorative purposes, as it may be had in bloom at any time from January till May, and though it is not odoriferous, yet its pretty mauve-coloured flowers and elliptic foliage give it a very pleasing character. As it will withstand the temperature of an ordinary conservatory for any length of time, it cannot properly be considered a stove-plant, but when it is required to be had in bloom early, it must be subjected to a stove temperature to bring it into flower.

To grow this fine *Franciscea* to perfection, pot it in a compost of two-thirds fibry peat, and one-third of loam ; add sufficient sand to make the whole porous. The peat should be broken up into small lumps, and the loam rubbed moderately fine between the hands ; it will consequently be necessary that the soil used should be in a proper state as to moisture, in order that it may be worked without clinging to the hands. In potting, fill about one-sixth of the depth of the pot with broken crocks for drainage, and place a layer of fibry peat over the crocks, to prevent this drainage from becoming choked. Pot moderately firm. To form specimens, the plants should be started into growth in February, in a temperature of from 60° to 65°, syringing them overhead night and morning, and keeping the soil in a proper state as to moisture. When the young shoots have each made three or four leaves, take off the points, and encourage a second growth. By the end of August let the plant be placed in a cooler temperature, and be kept rather short of water. After resting a few weeks they may again be placed in the stove, and syringing and watering attended to, as before directed.

When it is desired to have the plants in bloom early, they should be placed in the stove from eight to nine weeks previous to the time they are required to be in bloom. Later in the season, from six to seven weeks will be sufficient time to allow to bring them into bloom. As soon as the flowers begin to open, place the plants for a few days in a temperature of about 50°, and they may then be taken to the conservatory, where they will give a succession of flowers for several weeks. When the blooming is over, remove all decayed flowers, repot the plants, and proceed as before directed. In two or three years nice specimens may be grown. Some branches may perhaps show a tendency to take a decided lead, but by bringing down the tops of any such, and tying them so as to keep the point lower than the rest of the branch, the growth of the plant will be equalised, and growths of this kind will be prevented from taking an undue lead.—HENRY CHILMAN, *Somerley.*

## UTILISATION OF ORANGE-PEEL.

THERE have been so many deaths from accidents caused by Orange-peel flung on the pavement, that stringent rules have been enforced to stop such a dangerous practice. One of the best means of stopping this thoughtless scattering of Orange-peel is to employ it in some useful way, so as to take it quite out of the highways, and turn it to some beneficial purpose. In cider-making places, the apple-skins and straw, after pressing, are used for fuel ; and however odd it might seem at Newcastle, it is quite natural at Hereford and Exeter, not only to burn the apple-skins, but likewise to save the ashes, and put them through the turnip-drill like guano, for which purpose they are carefully housed from rain. Again, the hard rind of the cocoa-nut burns with a flame like that of an oil-lamp, and when it is broken in small pieces it is superior to most articles for kindling a fire.

I have named these apple-skins and nut-shells to prepare the reader for the using of orange-peel for the same end. Whoever has studied plants, must have remarked that the natural order *Myrtaceæ* has every leaf neatly larded with oil-bottles. The leaf of the Orange, and those of the *Aurantiaceæ*, to which it belongs, are also studded with minute oil-vessels, and if you hold up a leaf to the light, the oil-cysts will be seen from their being transparent. Now, the rind of the Orange-fruit—*i.e.*, Orange-peel—is, like the foliage, also studded with oil-bottles, and if the peel is strung on a thread and dried, the oily parts will, as soon as the watery part is evaporated, burn brightly and kindle other fuel. The Orange-flowers have an honoured place at nuptials ; the sweet juice is a luxury ;

the seeds are eaten by poultry,—and now we may light the fire with the rind, and it is, perhaps, the sweetest fuel we could find.—A. Forsyth.

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## GARDEN GOSSIP.

THE *Horticultural Exhibition at Dundee*, the busy capital of the jute trade, which opened on September 3, proved a first-class show, extending over three days, and being attended by 17,000 visitors. It was opened by the Earl of Strathmore, Lord-Lieutenant of the county, and was attended by a large assemblage of ladies and gentlemen, the *élite* of the town and surrounding districts. The encampment, pitched in the high-school grounds in the centre of the town, consisted of three immense marquees, supplied by Mr. Fusey, of Hull. The chief one, devoted to flowers, was 230 ft. in length by 47 ft. wide; the one occupied with fruit was 100 ft. in length by 47 ft. wide; while that set apart for vegetables was of equal dimensions. The leading feature was the magnificent collection of stove and green-house plants; while plants for table decoration were unexampled for number and beauty. Fruits were rich and abundant, the merchant princes excelling in grapes and pine-apples; while Mr. James Ferguson, a working-man, noted for beating professionals in the rearing of the Lilium auratum, was again first in his class. Alpines—never absent from Dundee shows—were there in profusion, rare, compact, and healthy, the best coming from E. Moir, Esq., a noted amateur in ferns. The general public paid £360 at the gates. The Society contemplates holding an International Exhibition in 1876.

—— The most remarkable feature at the *Belfast International Exhibition* was the bunch of *Black Hamburgh Grapes* shown by Mr. Hunter, gardener to the Earl of Durham, at Lambton Castle. This monster bunch weighed 21 lb. 12 oz. We believe nothing approaching this has been exhibited, or as far as we know, produced, in the case of a black Grape, although in the case of white Grapes, Syrian or White Nice have been shown of the respective weights of 17 lb., 18 lb., 19 lb. 5 oz., and 19½ lb. In reference to this matter the *Gardeners' Chronicle* gives the following details relating to black Grapes. There are several instances of 5 lb. bunches of Black Hamburgh Grapes recorded. In 1858 it is recorded that Mr. Davis, gardener at Oakhill, East Barnet, exhibited the finest bunch of Black Hamburgh that had up to that time ever been produced in the country; this bunch weighed 8½ lb., and was a symmetrical, well-shaped bunch, with the individual berries measuring 4½ in. round. In 1860 Mr. Payne, gardener to J. B. Bedell, Esq., of Chelmsford, showed a bunch of the same variety weighing 8 lb. 14 oz., but this was a conglomerate of four bunches all from one eye. In 1865 Mr. Meredith showed a bunch of Black Hamburgh weighing 9½ lb., and in 1873 Mr. Hunter showed at Manchester one bunch of Black Hamburgh weighing 9½ lb., and another weighing 13 lb. 2 oz.—a weight now thoroughly eclipsed by the specimen shown at Belfast. The Manchester show in September of last year was, it may be remembered, specially remarkable for the exhibits of Grapes, the weights being in many cases quite extraordinary.

—— There has recently been established in London, a *Pelargonium Society*, the object of which is, in the first instance, to encourage the cultivation and improve the quality of what is known as the Zonal Pelargonium, including under this general term the varieties which have resulted from the inter-breeding of P. zonale and P. inquinans; and for this object funds are being collected, with a view to offer prizes at one of the exhibitions of the Royal Horticultural Society, to be held in July, 1875. Dr. Denny is Hon. Treasurer, and Mr. T. Moore Hon. Secretary of this new Society.

—— Mr. Culverwell recommends that the beautiful *Tropæolum speciosum*, a plant which is rather fastidious as to position, but which grows well on the walls of cottages in Scotland, should be planted amongst rough clumps of Rhododendrons or other plants growing in a peaty soil. The effect of a scarlet topping on the dull green foliage during the autumn seasons would be very beautiful, and once planted in the Rhododendron soil, they will make a home of their own in the same way as the common Convolvulus does where it gets a hold. He has some plants at Thorpe Perrow growing in the Rhododendrons and in the Holly, which are very effective.

—— Among the finer *Double-flowered Clematis*, which are now becoming rather numerous, we have had an opportunity of seeing one called *Duke of Connaught*, a seedling from lanuginosa, having the same broad foliage, but with compact semi-double flowers of a delicate mauve colour, which on the starved seedling plant measured about 5 in. across. The structure of the flowers in this variety is somewhat novel. There is first the outer whorl of six ovate sepals, and then within this, diminishing in size inwards so as to form a flattish bloom, are four or five other whorls of sepals of the same colour, the centre being occupied by a tuft of whity-brown stamens on white filaments. If constant to this form, and there is no reason to doubt it, since several flowers have been produced this season, we have here a new type, of distinct character, and of great beauty, the flowers being spread out as in the single form, yet compactly filled with petaloid sepals in the centre, so as to form a stiff, firm, solid-looking flower. It bloomed last June with Mr. G. Jackman, of Woking. There is a manifest improvement in the new double forms of Clematis, the stalked sepaled sorts, which produce loose, open flowers such as can be seen through near the centre, being replaced by others in which the centre is filled up compactly in consequence of the sepals being stalkless. This character is well shown in Duchess of Edinburgh, the best of the whites; in Countess of Lovelace, which has been shown exceedingly fine this season; and in the Duke of Connaught, above cited.

—— M. Decaisne writes to the *Gardeners' Chronicle* that the *Xanthoceras sorbifolia* introduced to the Paris Museum has just produced twenty fruits, which have furnished more than 190 seeds for the propagation of this charming shrub. "I was surprised," he writes, "to see the Xanthoceras classed in the Chinese works among the edible trees; but the French Minister at Pekin, M. Geofroy, to whom I applied to obtain some information on this subject, told me that the Chinese eat the seeds of Xanthoceras as nuts, of which they have somewhat the taste. M. Geofroy has introduced to us, by the Chinese name, a large tree similar to the Ailantus in the general shape and foliage, the Cedrela sinensis, of which the Chinese eat the young shoots either raw or cooked; prepared in the latter way, these shoots, it is said, resemble Asparagus. But we know that the inhabitants of the Celestial empire are not very particular, inasmuch as that they make a delicacy of the young stalks of the Lucerne (*Medicago sativa*), which they eat as we do Spinach. Without mentioning the culinary use of *Cedrela sinensis*, the principal use of it to us is to have it in our plantations—a large tree, moreover, and belonging to an exotic family of which the *Melia* is at present the only representative in our southern gardens."

—— The *Journal of Chemistry* publishes a recipe for the *Destruction of Insects*, which, if it be one-half as efficacious as it is stated to be, will prove invaluable. Hot alum-water is this recent suggestion for an insecticide. It will, it is said, destroy red and black ants, cockroaches, spiders, bugs, and all the crawling pests which infest our houses. Take two pounds of alum and dissolve it in three or four quarts of boiling water; let it stand on the fire till the alum disappears; apply it with a brush, while nearly boiling-hot, to every joint and crevice in your closets, bedsteads, pantry-shelves, and the like. Brush the crevices in the floor of the skirting or mop-boards, if you suspect that they harbour vermin. If, in whitewashing a ceiling, plenty of alum is added to the lime, it will also serve to keep insects at a distance. Cockroaches will flee the paint which has been washed in cool alum-water.

—— A new *Oil*, obtained from the seeds of the *Ochro* (*Hibiscus esculentus*), is being intoduced into commerce. The seeds have been used roasted as a coffee substitute. The plant is well known in most tropical countries as a vegetable much esteemed for imparting mucilaginous thickening to soups. The seeds may be boiled like barley, and the mucilage they contain is both emollient and demulcent. The yield of oil from the seeds is not stated, but the oil is stated to be of good quality, and fitted to compete with olive, nut, and other oils for comestible purposes.

—— Those who want a fine and effective hardy herbaceous plant for any permanent position in the shrubbery or flower borders, should not overlook the old but not half-known *Spiræa Aruncus*. When grown in a rather peaty soil, on a cool bottom, which is what suits it best, its inflorescence rivals if it does not excel that of the famous *Astilbe (Hoteia) japonica*, while its handsome tripinnate foliage completes the picture of one of the most elegant hardy perennials grown in our gardens. For cutting, it is quite equal to the plant just named; while in the growing state, under favourable circumstances, since it reaches at least a height of 3 ft. to 4 ft., it may be employed to occupy positions where that would be altogether ineffective.

—— The charming *Begonia Martiana*, with some other species, are blooming freely out-doors on Mr. Wilson's rootery at Weybridge. This is a plant to be much recommended for a similar purpose in other gardens; and being tuberous-rooted, it may be a useful subject for intercrossing with the new race which has sprung up from B. boliviensis—which, by-the-by, is likely to be of some importance in out-door decorative gardening. One of these, B. Sedeni, which has been blooming most charmingly at Weybridge, has been in the same position on the rootery for a couple of years, the tops being reduced to pulp by the first frost, but the root springing up again in spring. The brilliant Begonia Veitchii, which has also stood out for two or three winters, is growing in the finest health, and blooms successionally through the summer and autumn months. All these are planted in a somewhat sunny situation. We learn that these tuberous-rooted Begonias are also flowering beautifully on the rockwork at Kew, and are a great attraction. The finest there are B. Sedeni, B. carminata, B. intermedia, B. Anacreon, and B. Stella.

—— The *Blue Daisy* (*Bellis rotundifolia, var. cærulescens*), now flowering on the rockwork at Kew, is one of the valuable additions to our collections brought home three years ago by the expedition to Morocco of Dr. Hooker, Messrs. Maw and Ball. It was figured in the *Botanical Magazine* last year, where we are informed that "the Blue Daisy is one of the commonest spring flowers in various parts of Morocco, abounding in fields with a rich soil on the hills near Tangier, and occurring in great profusion by the watercourses of the valleys of the Greater Atlas in latitude 31°, at elevations of 4,000 ft. to 11,000 ft." It flowers very profusely, and continues for a considerable time. The colour is rather pale, but with some of the few who possess it the colour has been bright. It does the best when planted on rockwork, and is increased by careful division, preferably of plants in pots.

—— The southern *Nertera depressa*, with its tiny stems and leaves forming a dense cushion, and covered with orange-red berries about the size of Sweet Peas, is one of the prettiest plants that can be used for rockwork. If placed in a warm house in spring, it will grow freely, and can be divided at will. Lange, supposing it distinct, in 1868 gave it the name *N. scapanioides*. There is, however, no sufficient character by which it can be distinguished. It has a wide geographical distribution, and appears to vary. It grows on the mountains of New Zealand and Tasmania, on the Island of Tristan d'Acunha, and on the Andes from Cape Horn to New Grenada.

—— A pure white variety of *Campanula isophylla*, a very choice species, is flowering on the rockwork at Kew. It was raised from seed some time ago in the Royal Gardens, and is a welcome addition for rockwork cultivation with the original. It may be increased from cuttings. C. isophylla is "native of the ancient Liguria," and is extremely limited as a wild plant; it has been said to grow only on one rocky promontory in the whole world, in this respect somewhat resembling its ally Campanula Vidalii.

—— In the *Journal of Botany*, Dr. Hance records, in a list of plants found at Kinkang, a city of China, in lat. 29° 54′ N., and long. 116° E., on the south bank of the river Yangtze, a district hitherto unknown to botanists, the discovery there of *Lilium speciosum, var. Kæmpferi*, of which he remarks:—"I am not aware that this beautiful plant, which Siebold believed to have been introduced into Japan from Korea, has heretofore been met with wild in China. It is a great favourite in Europe."

—— Amongst the *Orchard-house Trees*, in Mr. Wilson's garden, is a pot-tree of Coe's Golden Drop Plum which is quite remarkable. The entire crop brought to maturity was 212 fruits. It should be added that these are not dry, starveling fruits, but full-sized, succulent, high-flavoured examples of the variety, which is well known to be one of the best Plums in cultivation.

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—— Some of the finest examples of *Lilium auratum* we have yet seen were growing in the garden of James McIntosh, Esq., of Oatlands Park, Weybridge. These plants are planted at intervals near the margin of beds of Rhododendrons, which occur on sloping ground, near the foot of the hill-side on which Mr. McIntosh's garden stands, in a sheltered situation, and where there must be a moist atmosphere from the contiguity of a sheet of water; and they are, of course, in peat soil. The roots have, we learned, been planted four years, and now have, in many cases, divided so as to produce two stems. They range from 6 ft. to 9 ft. in height, many being of the latter stature, and in some cases the stems are 3 in. in circumference at the base. Many of the finest were gone out of bloom when we saw them, a few days since, but several still remained in full beauty, with from twenty to two dozen flowers, forming a noble head of blossoms from 1 ft. to 2 ft. in depth, and upwards of a foot in diameter. Being selected bulbs, with finely-shaped and richly-coloured flowers, some idea may be formed of their magnificent appearance; and the fact that they are so much at home in such a situation may furnish a useful hint to others in growing them.

—— We learn from Mr. Tyerman that the beautiful little *Oxalis lobata* is now flowering finely in his garden, in Cornwall. The bright yellow flowers of O. lobata, which are large compared with the leaves and short stature of the whole plant, which is barely a couple of inches high, make a really pretty and pleasing feature, such as is sure to arrest the attention of the most casual observer. When planted in masses, the ground looks studded with golden stars. Mr. Tyerman suggests that this very interesting genus of plants would do much to make our gardens more interesting at this season of the year, since they are all of the easiest possible cultivation, and in dry soils perfectly hardy, or at the utmost a slight protection from heavy rains during the dormant season would make them quite secure. O. elegans is, as its name implies, beautifully elegant; the leaves, which are of great substance and smooth, grow 3 in. to 4 in. high, and the flowers rise 6 in. or 8 in. above the leaves, of a pleasing rich purple-lake, with dark centre. O. Deppei is well known, its reddish flowers being produced well above the neat foliage for several months in succession, and like the beautiful rose-pink O. Bowiei, would make excellent variety in the modern flower garden. O. floribunda, with its numerous varieties, are hardy perennials, and are almost perpetual-flowering. Where the soil and situation are at all genial, all the summer-flowering kinds will prove much more satisfactory when grown in the open borders "than as they usually are, cramped in pots"; even that weedy species, O. lactæflora, is much more interesting in the open ground.

—— A writer in the *Gardeners' Record* mentions having seen, during the past season, a patch of *Double Primroses*, growing in an open and somewhat light soil, that generally suffered severely during the hot dry summer months. Some clay, in the form of a thin layer, which could but be termed a top-dressing of clay, was laid over the bed to the extent of one-half, and the effect was remarkable. The plants growing amid the dressing of clay were of quite a vigorous character, while the others, not so treated, had a deplorable appearance. No doubt the Primrose requires to be kept cool about the roots, and the beneficial effects of this practice were quite evident in this instance.

—— The *Dracænopsis australis*, after proving its power of enduring many a vicissitude of weather, has come into flower for the first time in Ireland, and for the first time out-of-doors in the United Kingdom, in the Botanic Gardens at Glasnevin. Dracænopsis is a genus of Liliaceous plant separated from Dracæna, and includes D. australis and D. indivisa. The stem of the Glasnevin plant is 9 ft. high, from the top of which springs a head of yucca-like leaves, and from the centre of these has grown up a mass of flower above 2 ft. long, and nearly as broad at its base. The colour of the flowers is creamy-white; each spike which goes to compose the mass seems much to resemble, as seen from the ground, the bloom of the beautiful half-hardy shrub, Veronica Andersoni, and others of the same genus. The plant has flowered at Oxford, but indoors.

—— Some remarkable plants of *Disa grandiflora* have been flowered this season at Doun House, Dorset, the seat of Sir William Marriott, where may have been seen specimens with more than eighty flowers in bloom at once. A pan of a finely-coloured variety, named superba, had thirty most brilliantly-coloured flowers. The

Disa is met with occasionally in gardens, and is always most attractive, but the successful mode of cultivating it does not seem to be generally understood. It can never become "everybody's plant," but in all probability it might be more frequently seen, if its cultivation were attentively taken up.

—— The *Canada Poplar (Populus canadensis)* has been largely planted about Munich, and other places in Germany, in avenues and public promenades. This tree grows quickly, and in almost any kind of soil; its only defect, as a shading tree, is, that it sometimes, if left to itself, shoots up into too spiral a form to be of service in that way. This, however, is easily guarded against, by heading-down the young trees to the height of from 12 ft. to 15 ft., and paying some attention to the pruning of the branches for some time, so as to secure the formation of handsome crowns. Treated in this way the trees are quite as effective, at some distance, as well-grown specimens of Horse Chestnuts.

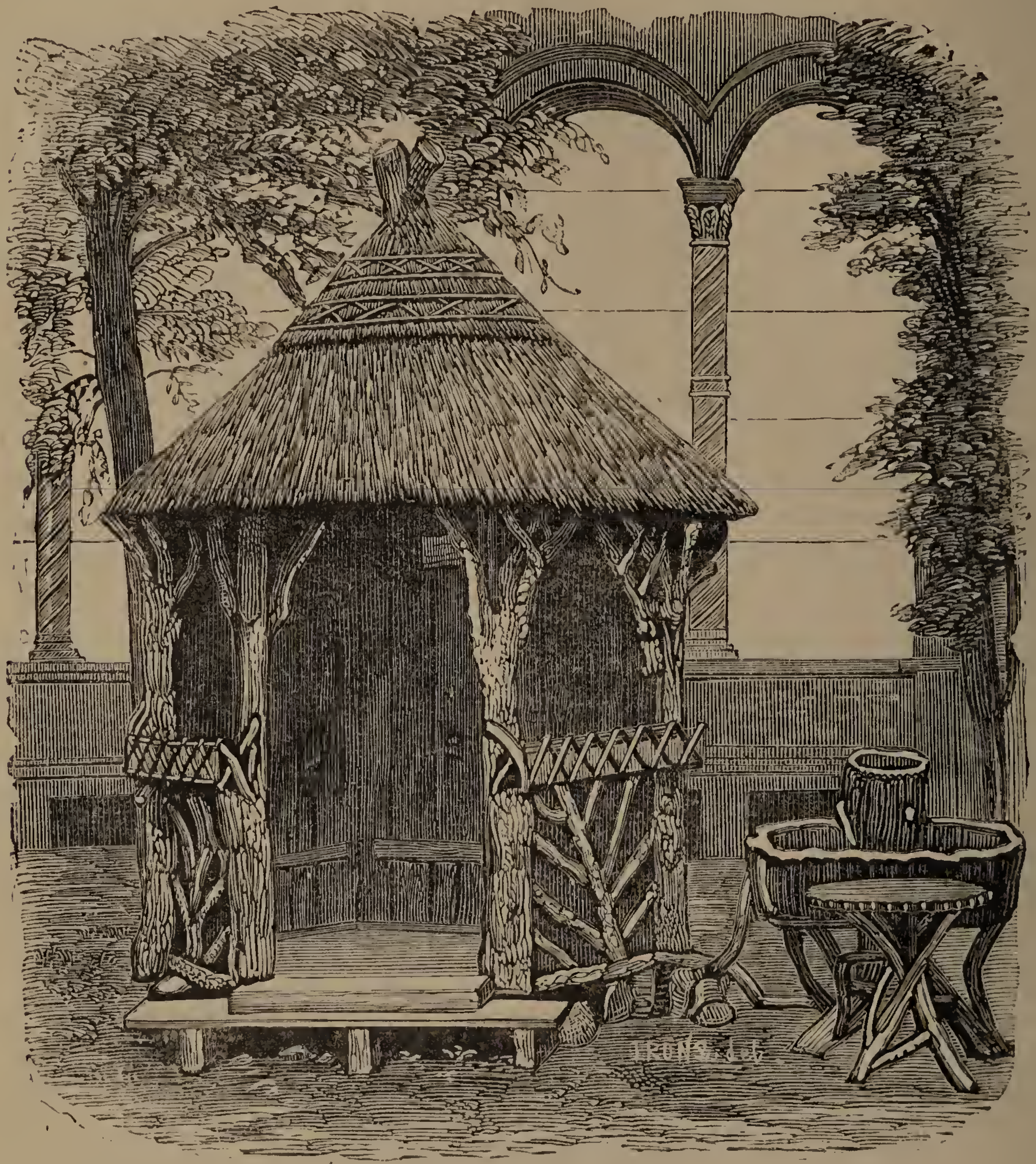
—— Bunches of *White Lily-flowers* are brought for sale to the French markets by the countrywomen, and a great number of these are purchased, not to make bouquets, but to preserve in brandy. The petals are pulled off one by one, and put into wide-mouthed pickle-bottles containing ordinary *eau-de-vie*, and are kept in this way from year to year. When any one receives a cut or wound, a brandied Lily-petal is produced, applied to the place, and fastened there with a bandage. Very powerful healing virtue is attributed to this floral plaister; and so general is the belief, that many grocers' shops keep in stock a glass jar of Lily-petals, which they retail at a sou a-piece.

—— The commercial *Insect Powder* is very liable to failure, but a powder prepared as follows from the same plant *(Pyrethrum roseum)* is most effective against moths, fleas, bed-bugs, and poultry vermin, and when administered in a weak infusion, is also a useful internal remedy against worms. Seeds of the *Pyrethrum*, which are obtainable from large seed-dealers, are to be sown in May, not too thickly, in a well-cultivated bed, and, if the weeds are kept down, will develop into strong plants by the autumn, although they seldom bloom before the next May or June. The flowers are to be plucked as they become fully developed, and the yellow disc-flowers separated from the red ray-florets, thoroughly dried in the shade, and finely pulverized. Flowers can be plucked even in the autumn, so that a few plants will produce a considerable quantity of the powder. As the plant is perennial, it can be propagated by division, and since it is indigenous to the Caucasus, it is not damaged by a low winter temperature.

—— Genista *polygalæfolia*, a native of Spain, is a very pretty flowering-shrub, and during summer is a mass of bright yellow flowers. *G. ovata*, a native of Hungary, is similar, but has smaller leaves, and is not such a free flowerer. Both are small shrubs, suitable for borders, and like the *G. virgata*, mentioned at page 163, are not so well known as they should be.

## RUSTIC SUMMER-HOUSE.

We gave at pp. 176-7, illustrations of two elegant forms of Rustic Summer-houses, introduced by Mr. J. C. Fox, and which may be seen in the garden of the Royal Horticultural Society, at South Kensington. The examples we have previously given were constructed with ordinary wooden roofs. We now introduce a design equally meritorious with those already submitted, but in which the roof is thatched. This, whatever the material employed for thatching, whether straw, or reeds, or heath, will have the advantage of being cooler in summer and warmer in winter than any other form of roof. The design forms an elegant retiring-house, alike adapted, by its warmth and coolness, for winter and summer use respectively. When thatched with heath or reeds, the roof is practically proof against being destroyed by rats, and in this form the model above given would cost from £20 to £40.—T. M.



RUSTIC SUMMER-HOUSE.

## WIRING *versus* NAILING.

WIRES stretched over the surface of walls for the purpose of training trees upon, and also for the important object of saving the walls from being constantly defaced by the drawing and replacement of nails, have long been in use in different gardens throughout the kingdom. It, however, appears somewhat remarkable that so little has been said or written regarding the system by those who have had the means of testing the results upon different aspects and with different kinds of fruit. This silence looks rather ominous, and I should fear certain sorts of fruit, such as Peaches, Nectarines, Apricots, &c., have not set their fruit so well, or come through periods of adverse spring weather so well, as those managed under the old system of nailing, and keeping the branches close to the wall.

My own views are very strong in favour of close-training. I have generally observed fruits ripen earlier and of larger size when touching the walls. But the most important feature in recommending close-training is, that of warding off late spring frosts. Walls absorb a considerable amount of heat through the day, whenever the sun shines upon them, and are consequently giving it off at night, so that the surface of a wall is at a higher temperature than is the atmosphere at an inch from it, where we will suppose the trained shoots upon wires to be. From the rarified condition of the air, the heat, as it becomes free from the solid surface, radiates quickly upwards through the space between the branches and the wall, which acts as a channel for the current of air to have free egress.

As some gardens are much more favourably situated than others, it is no fair criterion, when we hear of a crop of fruit being saved in certain places by adopting this or that means, while in others within a small radius of the same locality the crop has been lost through not adopting the same plan. The one place may be under the hoar-frost level, while the other was above it. Therefore, the only sure and certain way of arriving at clear and decided results, would be to test the two systems upon a wall having the same aspect, with the soil and everything else corresponding, and on the same sort and variety of fruit.

This is an experiment that the walls of the Royal Horticultural Society's Gardens at Chiswick would be well adapted for, and where, also, an impartial record of the result would be given. The spring is the trying season for British gardeners, and with such frequent disappointments, it is well to know the paths to success.—J. Webster, *Gordon Castle.*

# GARDEN WORK FOR OCTOBER.

## FLOWERS.

FLOWER-GARDENS will now be past their best, more particularly the flowering portion of the occupants, and before they suffer from frost, all the choice half-hardy plants should be lifted and placed under protection. The scarce sorts of *Pelargoniums* and the variegated-leaved varieties, if potted up singly, removing a portion of the foliage, and trimming them into form, will be found to establish themselves soonest if plunged in bottom-heat for a short time; and where this convenience will admit of starting the plants in heat, it is certainly the best plan. As most amateurs with but little convenience are desirous of wintering *Pelargoniums*, &c., in cold frames, I would remark that thorough dryness in the interior, which must be promoted through perfect drainage, must be ensured to obtain anything like success, and the plants and cuttings must be thoroughly hardened by free exposure as long as it can be done with safety. *Pelargoniums* may be wintered successfully in boxes, maintained in a dry and dormant state, in situations from which frost is excluded, removing the foliage, and packing the soil firmly about the roots.

As soon as the flower-beds become unsightly, they should be cleared at once, and planted with bulbs and other spring-flowering plants; and as all bulbs delight in a generous treatment, it is important that the manure should be thoroughly decomposed and incorporated with the soil, for when the roots are placed in contact with raw dung it is apt to engender decay. Flower-gardens during winter and spring may be made exceedingly effective, with the great variety of materials applicable for their embellishment which we possess. We have Evergreens in great variety, with graceful and picturesque forms, which may be introduced in masses, and should be freely used in winter adornment, as they not only give relief, but tone down the gorgeous brilliancy of the bulbs and hardy perennials when in bloom. *Lawns* and gravel-walks at this season of the year will require daily sweeping and rolling to keep them in good condition, and the grass must be kept closely mown.

*Evergreens* should now be transplanted as soon as possible, as the stored-up heat in the ground will promote the formation of fresh roots, an advantage not to be lost sight of. Deciduous trees and shrubs may be transplanted as soon as the leaves have fallen.

*Conservatory:* Any paucity of flowers which may occur here at the present time, through the scarcity of flowering-plants, must be compensated for by the introduction of foliage-plants. *Camellias* that have acquired the habit of early flowering by usage to forcing, will soon be in bloom, and may be assisted by a slight increase of temperature, airing freely at the same time, as a close, humid atmosphere is conducive to bud-dropping. *Pelargoniums* which have been prepared for autumn display will now form an important feature, and if watered with care, and kept in a healthy atmosphere, will stand for a length of time in bloom. *Salvia splendens* grown in pots will now be in bloom, and prove very effective in these short days. *Chrysanthemums* will now require every attention and encouragement. See that they are tied securely, and placed under protection in case of severe frosts. When size of bloom is the desideratum, thin-out the buds as soon as they can be handled, and keep the suckers under. *Cinerarias* which were struck early should be now shifted on into a rich, fibrous compost, being careful to thoroughly drain the pots; keep them near to the glass, and air freely, fumigating occasionally to prevent the green-fly.

*Greenhouses:* No tender plant should now remain out-of-doors, but at once be got into its winter quarters; avoid, however, anything in the shape of crowding, and attend carefully to watering and ventilating. Soft-wooded plants such as *Cyclamens*, *Statices*, *Epiphyllums*, *Bouvardias*, *Monochætums*, &c., should now be brought forward in a mild genial temperature, where they will soon come into bloom; when these plants are starved at this season of the year, they seldom bloom satisfactorily.

*Stoves:* Of the lovely *Eucharis amazonica*, a portion of the plants that have been rested should now be encouraged in a brisk heat; also *Poinsettias*. They should be liberally supplied with manure-water, and freely syringed, which will greatly promote their vigour of inflorescence. Attend well to *Gesneras* of the resplendens type, which are now growing freely, keeping them near to the glass, and free from insects; they are, when well grown, most effective subjects for embellishment. Promote the ripening of *Achimenes*, *Caladiums*, and *Gloxinias* in a dry, warm house, withholding water as the leaves decay, when they may be stored away in a dry temperature, not under 50°. Small-foliage plants that are grown for decoration must have just sufficient heat to keep the foliage healthy, but otherwise be so inured as to stand exposure without flagging. Plants from close, swampy stoves are useless for this purpose. *Pelargoniums* required to bloom in May should now be shifted into their blooming pots; a sound turfy loam, with one-third well-decayed manure and sand, with a free drainage, will grow them well, potting firmly and watering sparingly until established, and keeping them in a light, airy pit, near to the glass.

*Orchids:* Discontinue over-head syringing, although many plants will yet be making growth. It will be necessary to lower the night temperature a few degrees, ventilating more freely, so as to induce thorough maturation ; and although it is advantageous to keep *Aërides* and *Odontoglossums*, &c., always moist at the root, anything approaching excess will be injurious after this period. Water moderately *Calanthes* which are now pushing up their flower-spikes, and take every means to keep the leaves fresh as long as possible.

*Forcing-house:* Successional batches of *Bulbs* must be introduced from time to time ; these may be grown in comparatively small pots for very early forcing. Pot up a good supply of *Lily of the Valley*, either strong clumps from beds, or imported ones will answer best, if the others are not particularly strong. *Astilbe* (*Spiræa*) *japonica* is also a plant that should be grown in quantity ; although it does not force well early, or before the new year, it is one of our most valuable plants ; I find English-grown roots to force quite as well as imported ones. Introduce by degrees the various subjects to be brought forward.

Keep *Bedding Stock* fully exposed as long as the weather will permit, and prepare frames for the protection of all but hardy plants. Have everything in readiness to afford protection from frost. Propagate in cold frames *Calceolarias*, *Violas*, &c. Pot *Solanums* and *Campanulas* that have been planted out. A supply of root-cuttings of the fleshy roots of *C. pyramidalis* should be put in for planting out next spring.—Geo. Westland, *Witley Court.*

### FRUITS.

*Pines:* A steady bottom-heat of from 75° to 80° should be kept to the succession-plants, and the top-heat from 70° to 75°, according to the state of the weather. Admit air at every favourable opportunity, closing early in the afternoon. Pot suckers as they are taken from the stools. See previous directions for the fruiting-pits.

*Peach-house:* When the trees are entirely clear of leaves in the early house, they may be pruned, the borders forked over, and a liberal dressing of rotten manure and loam placed on. If the trees are in a weakly state, either from over-cropping or other causes, the borders should have a good soaking of liquid manure.

*Vinery:* Keep a dry airy atmosphere about ripe Grapes, applying a little fire-heat in the day-time in damp weather, but giving air at the same time. Look frequently over the bunches, and cut out all decayed berries. If very early grapes are desired, the Vines in the early house may now be pruned, and preparations made for closing the house by the end of the month. If Pot-Vines are used for early work, the first lot should be placed in a gentle, moist heat, about the same time.

*Melons:* If the melon-pits are heated, and any fruit remains unripe, a little fire-heat should be used. Very little can be done with them in dung-beds, after this time.

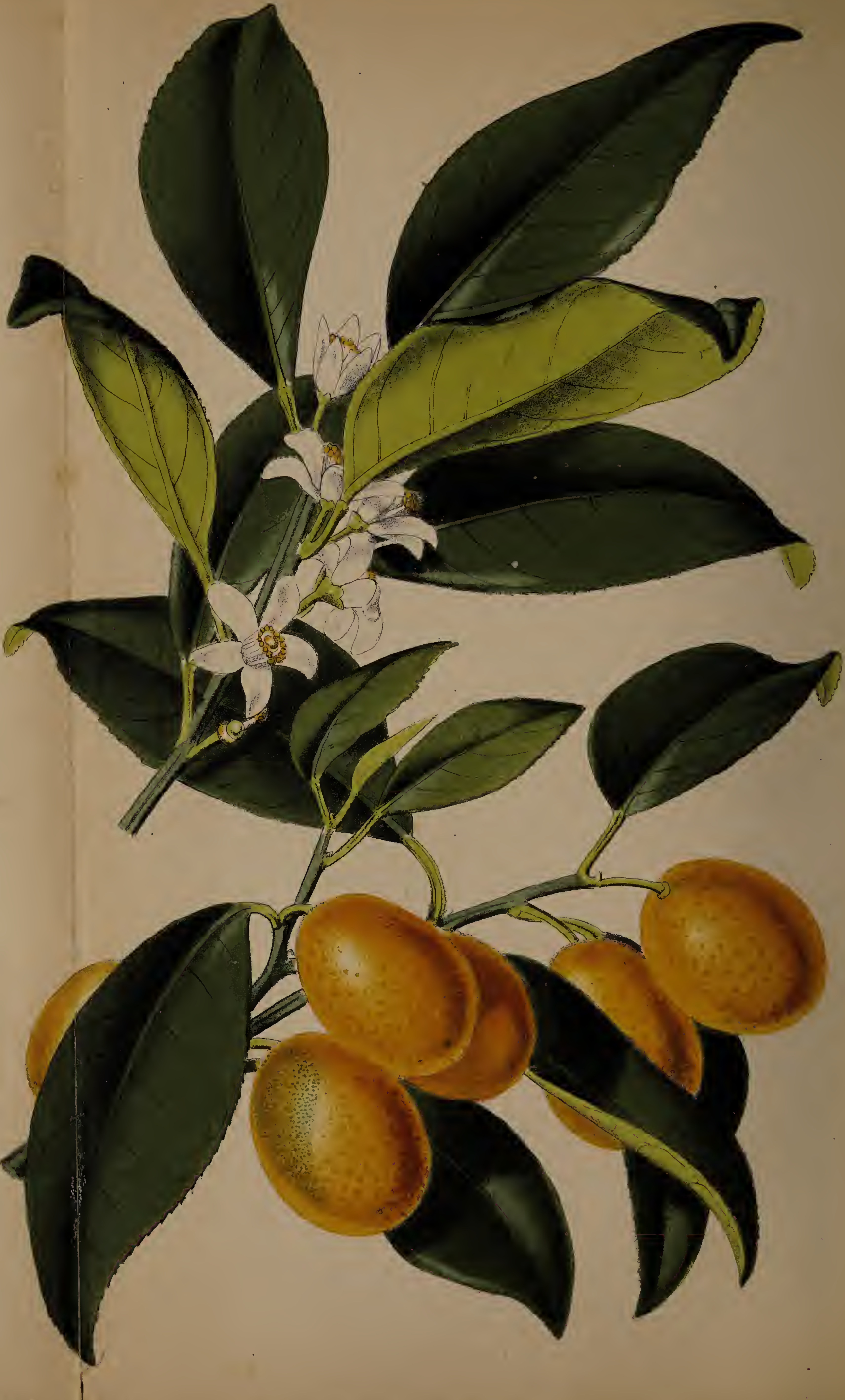
*Strawberries* in pots should be kept in the open and moderately dry, which will check their growth, and help to ripen their crowns. If heavy rains should prevail at the end of the month, turn the pots over on their sides.

*Hardy Fruit:* The prevalence of dry weather in many parts during the latter part of the summer will tend to hasten the maturity of the winter fruit, and many varieties may consequently require gathering earlier than usual. Keep, therefore, a watchful eye on all autumnal varieties. The long-keeping Apples and Pears should be allowed to remain on the trees as long as they will hang without dropping, or as the weather appears to favour their maturity. Indeed, it is preferable to lose a few by dropping than to gather too early. In gathering, great care should be taken not to bruise the fruit, especially the finer varieties of *Pears*, which should be laid singly on the shelves, and not be again moved till they are ready for table. Air and light should be admitted to the fruit store for a month or so after the fruit is gathered, to allow the moisture given out by it to pass away; but after that time, it is best to close the store, taking care at all times to remove quickly the decaying fruit. Expose late *Peaches* wholly to the sun, by removing the leaves from the fruit; cover them at night with canvas if frosty, or it is a good plan to place spare lights over the trees.

Finish clearing out runners, &c., from *Strawberry*-beds, and get the ground forked over between the plants at once; new plantations may still be made. All kinds of young fruit-trees may be planted as soon as the leaves have partially or wholly fallen, but it is not advisable to remove them before this, especially in the case of large trees. Plant *Raspberry*-canes, and propagate *Gooseberries* and *Currants*. Gather *Filberts* and *Walnuts;* dry them well, before storing them in boxes or jars for winter use.—J. POWELL, *Frogmore.*

## VEGETABLES.

A point should be made during the early part of this month to give to all *Winter crops* a thorough hoeing and weeding, always, if possible, choosing dry weather for the work. If this is not done, the chances are that all such crops will become foul, and exhibit a weedy and untidy appearance throughout the whole winter. More particularly should such a hoeing be given to *Winter Spinach*, which thrives and does far better after surface-stirring than when the ground is allowed to remain firm and hard beaten. Vacant spaces should be ridged up for the winter at the earliest possible moment. All light grounds which have not been trenched during the past three or four years may be so operated upon with much advantage; at the same time, any garden refuse of whatever description may be wheeled thereon and worked in. We are too apt to deal with green refuse as if it were valueless, often burning it to ashes, the fact being that it is one of the most powerful fertilisers we possess, if it can but be buried in sufficient quantities. Take up the main crops of *Parsnips* and *Carrots*, more especially the latter, as soon as their green tops show signs of ripening off. We are, however, much opposed to the practice of taking up Parsnips, except as they are required for use, for they are not nearly so good when so treated, but become dry, tough, and stringy, whereas if left in the ground until required for use, they remain tender, and as we should surmise, far more nutritious. The young seedling *Cauliflowers* intended for the earlier spring crops must be carefully looked to, for slugs and a variety of insect pests often play great havoc amongst them at this time of year, unless their ravages are guarded against. Transplant young *Lettuces*, the produce of seeds sown during August, as suggested. This will be found a useful crop for the very early spring supply. Those who possess the necessary frames or pits should fill them with any larger-sized *Lettuces* and *Endive*, so that they may be protected from inclement weather, should it set in a month or two hence; but when they are so planted, always take off the lights bodily and treat the crop as if it were an out-door one, only making use of the sashes by and by, and when it becomes absolutely necessary. Towards the end, or third week in the month, the late July or early August-sown plants should also be transplanted to their permanent quarters. Always plant these out freely and abundantly, as it rarely, if ever, occurs that too many are planted, or too large a supply of these very tender and highly-appreciated spring vegetables is provided. —WILLIAM EARLEY, *Valentines.*



W.H. Fitch del.

# THE KUMQUAT, CITRUS JAPONICA.

WITH AN ILLUSTRATION.

WE have here a plant which may certainly be said to combine the ornamental with the useful; for while a bush of the *Citrus japonica* in flower and fruit is an object remarkable for its beauty, and the fruits themselves, when cut with a leaf or two attached, form one of the prettiest ornaments of the dessert, they are also excellent as a preserve.

The plant has been known since the days of Thunberg, who named it and figured it in his *Icones Japonicæ* about the close of the last century. It remained unknown in our gardens, however, until introduced from China by Mr. Fortune, about 1845, the first account of it being published in 1848 (*Journ. Hort. Soc.*, iii., 239, with woodcut). Mr. Fortune states that in the south of China, about Canton, it is much grown in pots, but on the island of Chusan, and elsewhere in the more northern parts of China, he met with it cultivated in groves on the sides of the lower hills, the plants, which do not attain to a larger size than about 6 ft. in height, being arranged in rows about 4 ft. apart. The fruit ripens late in the autumn, and is about the size of a large oval gooseberry, having a sweet rind, and a sharp acid pulp. It is largely employed in China in making a preserve with sugar, and when manipulated according to the Chinese method, is excellent. This preserve finds its way to this country in considerable quantities. The plant is also cultivated in Japan.

The cultivated plant resembles a dwarf small-flowered Orange-tree, but with thinner, smaller, and narrower leaves. It varies with spiny and with unarmed branches, and also with oblong and globular fruits. The fruits, with their bright orange rind, are not very fragrant until cut or scraped, when their perfume is highly agreeable. The skin is thin, and the five cells are filled with a very acid pulp. Samples of the fruits from the Chiswick Garden were first exhibited in April, 1854, at one of the Regent-Street meetings, the plant having then "just begun to bear in the garden." It was again scarcely heard of till 1867, when Mr. Bateman showed some fine specimens from his garden at Knypersley, the plant being there "trained over the back wall of a stove, or, rather, warm greenhouse," and when covered with its golden fruits, having a lovely appearance. It was again exhibited from the same place in 1874, and we have to thank Mr. Sherratt, by whom the Knypersley Gardens are now held, for the specimens, both of the flowering and fruiting branches, from which the accompanying characteristic figure has been prepared.

Mr. Fortune remarks (*Journ. Roy. Hort. Soc.*, n.s. ii., 47) that, from a horticultural point of view, we must in this country regard the Kumquat as an ornamental plant only, the cold winters and warm summers of the north of China indicating the conditions under which it thrives. In winter it will bear, without injury, from 10° to 15° of frost, but a hot summer temperature is necessary to ripen its wood. "There ought to be no difficulty," Mr. Fortune continues, "in cultivating the Kumquat in England. If we wish to have it in high health and vigour, we must keep it cold and rather dry in winter. During its season of growth in summer it ought to have a liberal supply of water, and a temperature of from 80° to 100°, and this heat should be kept well up even in autumn, in order that the young wood may be well ripened. If properly cultivated, so as to be kept in high health, and induced to bear its annual crop of shining little oranges, it would make an admirable plant for table-decoration, and would remain covered with its fruit for several months. Graft on *Limonia trifoliata;* do not graft on a more tender plant. It does best when planted in a border, but the Chinese can manage it in pots, and we may do so as well."

The tree at Knypersley, which is trained against the greenhouse wall, is now about 15 ft. high, and the spread of the branches nearly the same. Mr. Sherratt finds that it does not do well if kept in a pot, and, moreover, that it will not graft upon the common Orange—the latter a pretty sure indication of its specific distinctness. The plant comes into bloom soon after midsummer, and the fruit begins to ripen shortly before Christmas, and constitutes a beautiful ornament, if nothing besides, all through the spring, and on into the summer.—T. M.

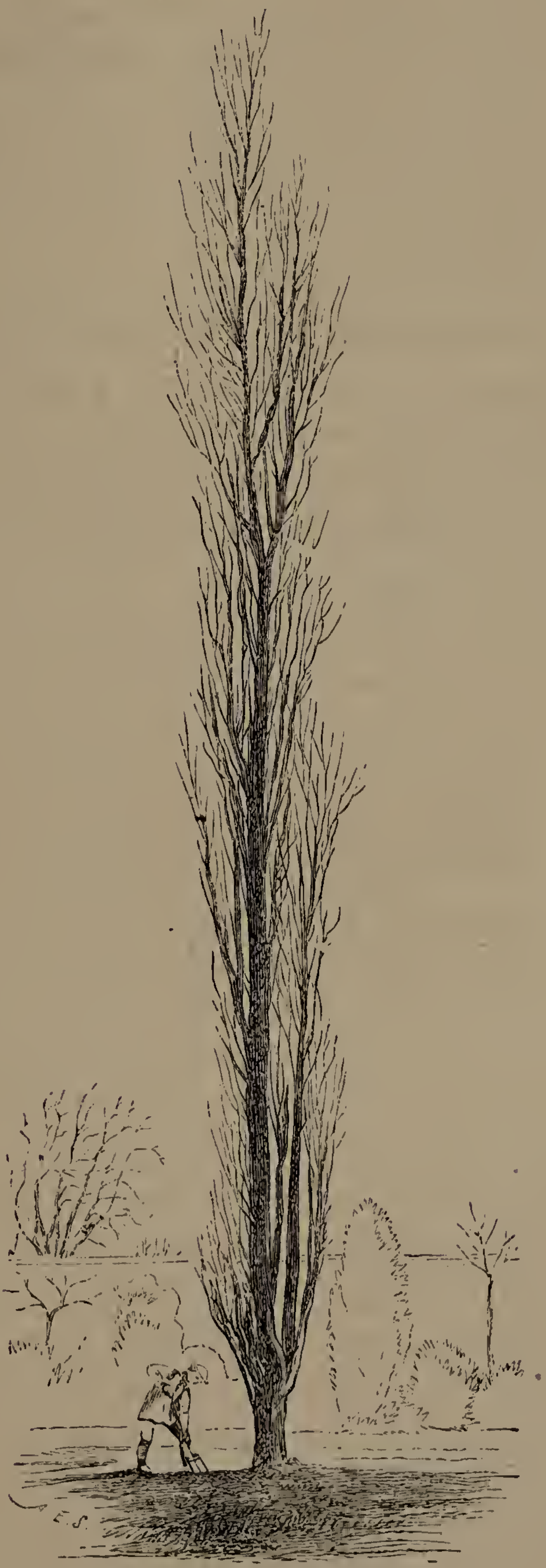
## VIBURNUM PLICATUM.

I PERCEIVE that Mr. Earley, at p. 205, mentions with commendation the *Viburnum plicatum;* but he has not said so much in its favour as it really deserves. I had it some years ago from Mr. Veitch, and am therefore able to speak of it as one of the most useful and ornamental of plants, either for shrubbery borders, or for growing against a wall. In the latter case, it should be allowed to ramble about amongst the other tenants of the wall in a desultory manner, not formally trained; and in the flowering season it will be a complete mass of flowers, first of a very pale yellowish green, but changing eventually to large balls of the purest white, and lasting comparatively a long time. When planted in the open border, it must be occasionally pinched back during the growing season, to reduce it to a compact shape. Under these conditions, it flowers most profusely and is a very striking object indeed. My experience of *V. macrocephalum* is, that it has a tendency to flower too early for the climate, but when it escapes spring frosts, it bears indeed a grand mass of flowers, the heads being as large as the largest Hydrangeas.—JOHN COX, *Redleaf.*

## ROBINIA PSEUD-ACACIA PYRAMIDALIS.

WE have to thank Messrs. Transon Brothers, of Orleans, for the photograph of the oldest existing tree of this remarkably ornamental variety, from which the accompanying woodcut has been prepared. The figure was taken in winter, when the tree was devoid of foliage, in order the better to show the unmistakably fastigiate habit which it possesses, and which renders it a most desirable tree for the planter, who is desirous of working out picturesque effects, its character and leafage being so strikingly different from those of the Lombardy Poplar, while the outline of the tree is very similar.

We learn from the Messrs. Transon that the parent tree was found by their grandfather in 1829, growing near the gate of a farm, some few leagues distant from Orleans, the plant being then fully ten years old, and having up to that time passed unnoticed by any horticulturist. M. Transon procured grafts of the tree, which were worked in due course, and one of them being planted in his grounds, has grown into the noble specimen, now about 62 ft. in height, which is repre-



ROBINIA PSEUD-ACACIA PYRAMIDALIS.

sented in our figure. A young tree in the Waltham Cross Nursery fully accords as to habit with the subjoined figure. The tree was, it appears, at once put into commerce, and when M. Transon went the following year to obtain more grafts, he found that the original tree had been accidentally broken down, and that the proprietor had uprooted it.

Irrespective of its remarkable habit, and its consequent value as a pictorial tree, this Pyramidal Acacia is further interesting on account of its strongly marked deviation from the natural habit of the species. How it originated can, under the circumstances, only be inferred, but it was most probably a seedling, and if so, only furnishes another example of the power to develop new forms which seems to be inherent in plants.—T. MOORE.

## COVERING VINE-BORDERS.

PERHAPS there is no class of men having a daily occupation who are more completely obliged to take "thought for to-morrow" than gardeners. They have to look ahead for months, nay, for years, in nearly all that is done in the garden; and this brings me to my subject—that of how the early Vine-borders are to be protected during winter.

Some twenty years ago, many writers recommended the chambering and heating of the Vine-borders. Now, there is a reaction, and many cultivators recommend that six inches or a foot of litter should be thrown over the surface of the border, and believe that all will then be well. I do not quite agree with the former, and certainly not with the latter. Nothing, surely, can be more unnatural than that a Vine started, say, in November, should in the following February, when in full vigour of growth, be exposed to a downfall of snow or cold rain, which, finding its way into the border, would effectually chill the roots—these, it must be supposed, being then in a state of active growth. In localities where the rainfall is usually low, and the subsoil is porous, the non-covering principle may succeed; but not in wet localities, for under such circumstances, the Vine-border would be in a miserable plight during the dark cold days of winter.

Various plans are resorted to for the purpose of keeping the Vine-border dry—and I believe that is all which is necessary. When the border has sufficient fall, a good covering of one or two feet of litter or fern, and the whole thatched, answers very well. The plan which I adopted here some ten years ago was to cover the border about the middle of October, and then to cover that again all over with wooden shutters made for the purpose. These, when taken off, are truly invaluable in hardening off the bedding plants, some six or eight weeks previous to their being turned out in the flower garden.

More than twice ten years ago, I became a head-gardener near London, and as litter and wood were both very scarce in the locality where I was placed, I covered the border of the early house with a lot of roof-tiles, of which we happened to have plenty; this was to keep the border dry. On the top of the tiles I put a foot of stable-manure. The result was satisfactory, for on the 1st of April I cut three bunches as black as sloes, and carried them up to the Regent-Street rooms. Did not my heart beat high, when Dr. Lindley praised the young gardener's first attempt at exhibiting!—J. RUST, *Eridge Castle*, *Tunbridge Wells.*

## FUCHSIAS FOR FLOWER-GARDEN DECORATION.

UP to the present time, the Fuchsia has not become a popular flower-garden favourite, yet there are no plants which are more deserving of out-door culture than the different varieties of the Fuchsia. Their neatness of growth, and the gracefulness of their pendent blossoms, together with their varied colours, all unite to render them highly ornamental and full of interest. A group of Fuchsias, nicely arranged either in a circular or square bed, placing the tallest in the centre, and diminishing in size towards the edge of the bed, so that its appearance is that of a cone or pyramid, forms an object worthy of considerable notice; and the effect is rendered still more beautiful by the regularity and uniformity of the mass of colour, either self or varied. Such a bed would be more attractive and would command more attention than a bed of Mrs. Pollock Pelargonium. The spot selected should be protected from rough winds; water should be copiously used in dry weather, and a slight mulching of rotten manure will be found very beneficial.—ED. BENNETT, *Gardener to the Marquis of Salisbury*, *Hatfield*, *Herts.*

⁂ The Fuchsias planted out by Mr. Sage, near his residence, and which chiefly consist of old plants, flower beautifully every year, and fully bear out Mr. Bennett's recommendation. They are taken up in winter, so that the old stems are preserved, and are prepared and replanted in spring.—ED.

## CULTURE OF THE GOOSEBERRY.—II.

IN training-out the young wood of the second year's growth, the operator will have to be guided by the mode selected. If he adopts the horizontal, he will permit the three extreme shoots to develop as strong a growth as he can induce by extra feeding; the centre one to be trained quite upright, and the two side-shoots horizontally, as in fig. 1. After making about a foot or so in growth, the centre shoot may be stopped, in order to divert more sap into the side-shoots, which latter may be allowed to develop as much growth as they will without being stopped. Each tree will therefore require five small stakes, one upright for the centre, and two on each side, which latter may be shifted as the growth advances, always remembering that the training must be commenced as soon as there are about three inches of growth, and be followed up as growth advances. If, on the other hand, the vertical mode is selected, the foundation must be laid by training-out the two-side shoots, as in fig. 3; but no centre stakes will be required for training, as in the former case.

At the end of the season, these plants may be said to be prepared for planting in their final positions, and if convenience be studied, there can be none better than in a line parallel with the pathways, and at a distance of not less than 2 ft.

from them. The narrow border thus formed will be found useful in a variety of ways; though nothing which grows large, especially any of the Brassica tribe, should be introduced. It may be planted with Strawberries, or Lettuces, or Parsley, or any such-like light crop, or, if preferred, may be made ornamental and attractive with small, low-growing, sweet-scented flowers.

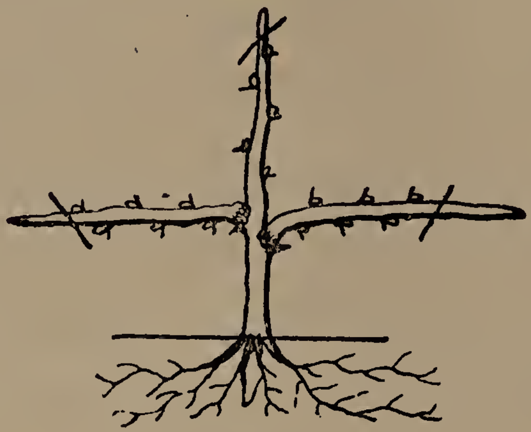


Fig. 1.

The ground should be trenched and prepared for planting by the addition of a little fresh compost, and if very poor, some good decayed hot-bed manure should be added. Plant early in October, and the trees will not miss the moving. The distance apart must not be less than 6 ft., and need not be more, and by adopting this distance, the trellis may soon be completely filled with bearing-wood.

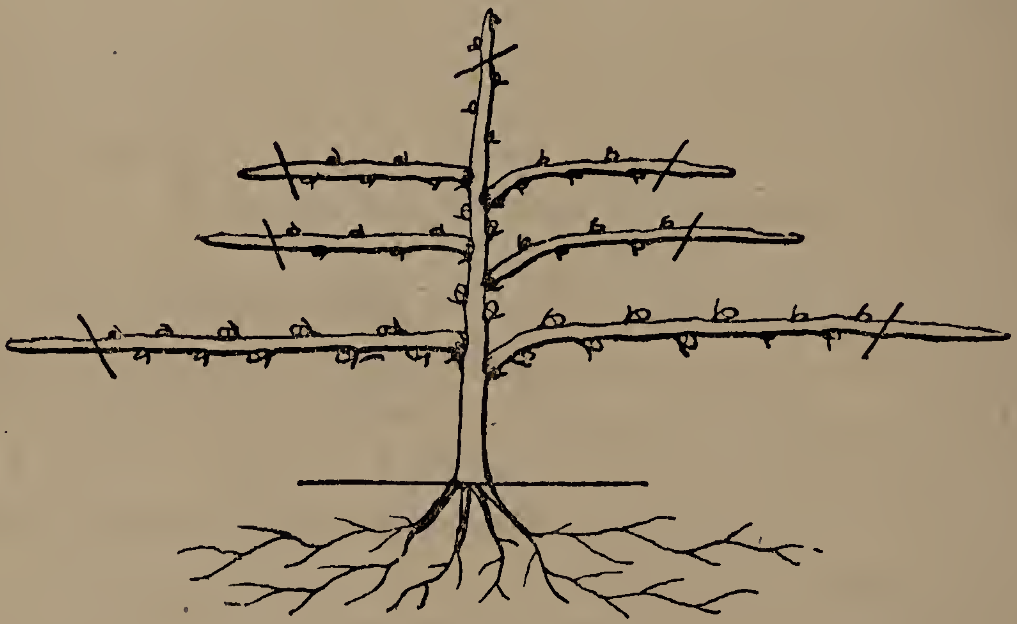


Fig. 2.

In the second year, the training required by fig. 1 will consist in leading up the centre shoot as before, and in laying in two more shoots on each side, if the tree is strong, but if weakly one only should be taken on each side. The tree will then have the form of fig. 2, and the same principle must be carried on in succeeding years, until the trellis is furnished.

The training of fig. 3 is very simple, and is the form I should always recommend. Continue to train out the extreme shoot on each side horizontally, and select two good shoots at equal distances on each side, and train them vertically. The shape will then be as shown in fig. 4; and as in the other case, the future training must be carried out on the same principle until the trellis is full.

The foundation being thus laid, the manipulation of the surplus branches becomes the most important part of the treatment. For a few years there will be no occasion to remove any shoots entirely, but all except the leaders must be pinched back at about 1 in. from the stem, taking care not to damage the leaves on the part retained. Any future growth must also, in like manner, be pinched back, as in this constant pinching-back lies the secret of success. As years advance it will be found that these side-shoots, which will then form what are called spurs, become too numerous, and for the good of the fruit they must be carefully thinned out during the dormant season, when the most fruitful spurs can be retained. If at any time one of the leading shoots should become naked or damaged, cut it back to the main stem, and train in a new one in its place. In this manner the whole of the bearing-shoots may be renovated with young wood.

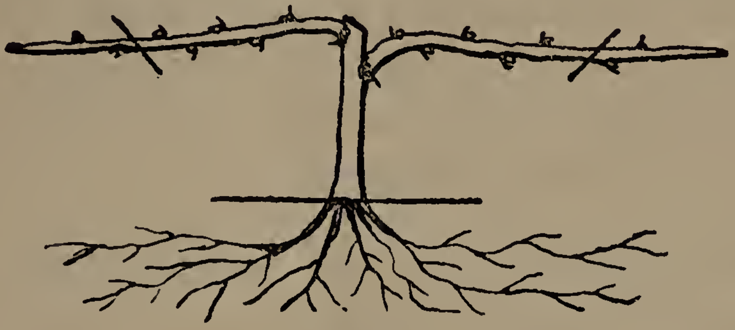


Fig. 3.

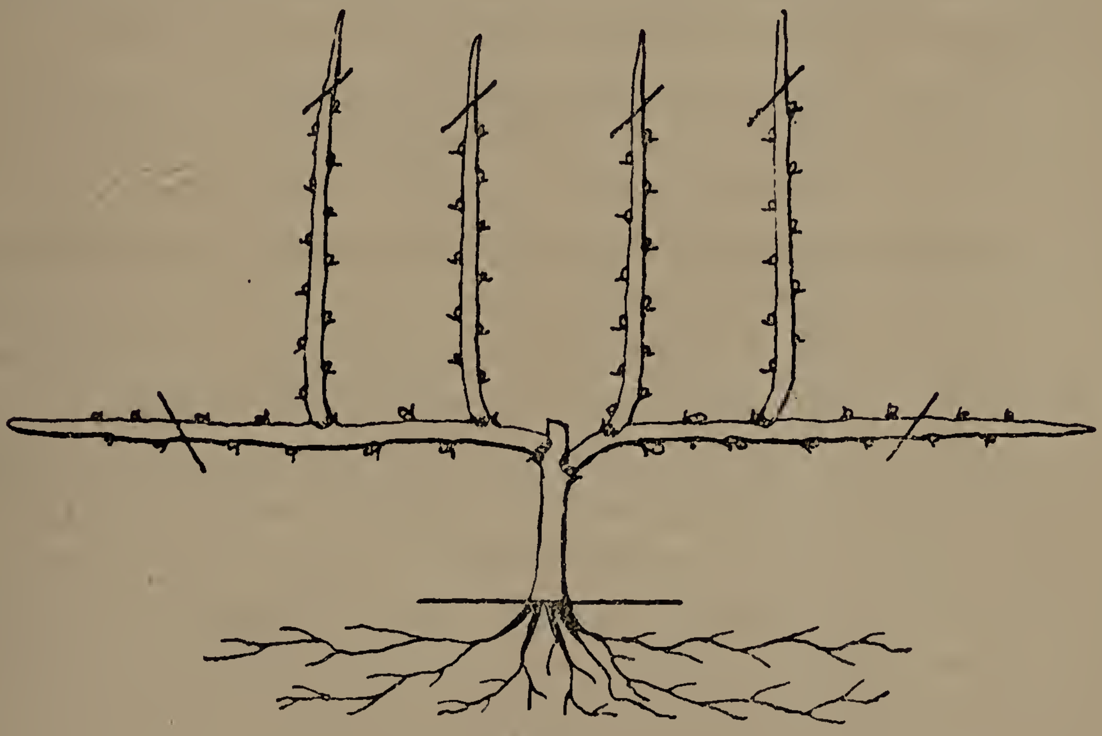


Fig. 4.

The trellis may either be formed of strained wire, set up in the usual way, and 4 ft. 6 in. high, or it may be formed of upright posts 6 ft. apart, with horizontal bars nailed on; but whether wires or bars are used, they should not be more than 6 in. apart. That part of the post which is inserted into the ground should be previously well covered with boiling gas-tar, and all the woodwork should be painted a neutral colour.

The following are good sorts for general useful purposes, for the kitchen and dessert:—*Ironmonger*, hairy red; *Red Warrington*, hairy red; *Whitesmith*, downy white; *Green Walnut*, smooth green; *Red Champagne*, hairy red; *Yellow Champagne*, hairy yellow; *Rockwood*, hairy yellow; *Heart of Oak*, smooth green.

Some amateurs may desire to cultivate the large Lancashire varieties. These will require to have the fruit very severely thinned, but in other respects the treatment is identical. The following are eligible sorts:—*London*, smooth red; *Conquering Hero*, smooth red; *Freedom*, smooth white; *Queen of Trumps*, smooth white; *Leader*, smooth yellow; *Catherina*, hairy yellow; *Thumper*, smooth green; *General*, smooth green.—JOHN COX, *Redleaf.*

## CULTURE OF THE OLEANDER.

THE *Nerium Oleander splendens* and its allies are undoubtedly very magnificent objects when well grown and full of flower, and yet how seldom are they seen in a luxuriant condition, or even seen at all in any shape, except in very few gardens! In France, as well as in other countries, they are grown in large numbers, and in great perfection, not only in large tubs to a great size, as we find them at Versailles and at other places, but in a small and portable shape—quite little plants, a foot or fifteen inches high or so, covered with flowers. Of course in such a small state the flowers are not so large as when grown in a planted-out manner, or cultivated in large pots; nevertheless they are very handsome, and they last a long while in bloom in healthy rooms or balconies, provided care in watering with nice tepid water, and washing overhead occasionally, be persevered in. The Oleander, like every other plant, comparatively speaking, is easily grown and flowered when one knows how; but many know how to do a thing, and many more know how not to do it. Therefore a few curt instructions to those who do not know may be acceptable.

The propagation of this very showy plant may be effected in this wise. At this season (September), when growth is matured, select cuttings 8 in. or 10 in. in length; insert each in a small bottle of water, with a pinch of wood-charcoal in each bottle, and place the bottles in a warm house, such as a plant-stove, or any other place, where the heat is not less than 60° or 70°. In a month or six weeks these will be rooted, when they may be potted in as small pots as possible, without injuring the roots, using loam and river-sand in equal proportions; but they do not seem particular as to soil, provided it is wholesome, and the pots are well-drained. If kept in a warmish place, with moisture in the atmosphere, they soon get established in their second progressive state. In early spring, as the days lengthen and growth commences, give them more moisture and heat, and towards April they may be shifted into a size-larger pot. By no means give them too large a shift. A lively heat and an abundance of moisture will be all they need till they show signs of flowering, which they will do about August. The admission of plenty of air, and partially withholding water for a month at this period (September), will be a rest to them; they may then be put into a warm moist heat as before, and their flowers will open in abundance in

October, and on to Christmas. Some of course will not show signs of flowering the first season; these may continue on in a cool resting temperature during the winter, when in early spring they may be started into growth; and these will mature their shoots and flower in summer and early autumn.

It must be borne in mind that the Oleander requires a liberal supply of moisture, both at root and branch, when growing; and on the other hand, it must not get into a stagnant state, so that caution must be exercised in giving a very liberal drainage in all cases. In a planted-out state, the Oleander makes a splendid bush, and throws out great shoots 4 ft. or 5 ft. long, which throw splendid large trusses of flowers, some of the individual flowers measuring 4 in. in diameter. Of course, the Oleander requires no shade, but every ray of sun must be given the plants at all times. The variegated-leaved form is very pretty, but its flowers are not nearly so fine as those of the green kinds; this does not strike well, and it is better grafted on the green.

There seem to be only two or three kinds known in this country to any extent, and it is pleasing to learn that the Messrs. E. G. Henderson and Son have some beautiful single varieties, with large improved flowers, which may prove great acquisitions to the flower-forcing gardener. The white one will be a valuable addition; and though not new, Messrs. Henderson deserve universal thanks for bringing it before the public.—H. Knight, *Floors.*

## IXIOLIRION PALLASII.

OF this beautiful bulbous plant, a good figure has recently appeared in the *Gartenflora* (t. 775). It grows naturally in the steppes of Southern Russia, extending to the Caucasus and South Altai, and from thence to Turkestan. It is a slender-growing Amaryllid, with small bulbs about the size of nuts, and a tallish leafy stem, from which numerous blue flowers are evolved. This plant is said to be a synonym of *I. montanum*, but the flowers are very different in form as represented in the published figures. The flowers of *I. montanum* are much larger and more expanded, and the anthers as represented are quite dissimilar, while the colour is a dull purple instead of bright blue. *I. Pallasii* produces a pair of linear channeled leaves, and some five or six funnel-shaped flowers, with the outer side of the tube pale-coloured, and the limb segments closely recurved, and bright blue, the flowers being rather less than an inch in expansion. *I. montanum*, which has more numerous flowers, one to three-flowered branches appearing in the axils of the upper leaves and bracts, is represented to have much larger flowers, with more spreading segments, so that the perianth measures two inches across or more. *I. tataricum* (or *Ledebouri*) has still more expanded white flowers. These are all hardy plants, and, in the case of *I. Pallasii,* grow much better in open beds, even in Russia, than in pots. *I. montanum*, though in full leaf, withstood the severe frosts of winter, and flowered beautifully in Dean Herbert's garden in the May and June following, perfecting good seed in July. The bulbs being small, the greatest risk would probably be from accidental disturbance during the resting period.—T. Moore.

# NOTABLE NEW PLANTS AND FLOWERS.

[f.c.c. = First-class Certificate; b.c. = Botanical Certificate; f.c. = Floricultural Certificate.]

BEGONIA Model [f.c.c.].—A fine hybrid variety, strong in growth; the flowers large, very profuse, and of a rosy-crimson colour; a valuable decorative plant.—*Messrs. Veitch & Sons: R.H.S., Sept.* 2.

Begonia Royalty [f.c.c.].—A dwarf-habited free-blooming hybrid, the leaves showing faint silvery ribs; the flowers very large, brick-red, the females as large, or nearly so, as the males.—*Mr. J. Chambers: R.H.S., Oct.* 7.

Cattleya fausta [f.c.c.].—A fine hybrid between *C. Loddigesii* and *C. exoniensis*, with two-leaved stems a foot high; the flowers broad-petaled, purplish-rose, the lip purple, yellow at the base.—*Messrs. Veitch & Sons: R.H.S., Oct.* 7.

Dahlia Countess of Pembroke [f.c.c.].—Primrose-buff, a very pleasing and novel flower, full-sized, of great substance, and excellent form.—*Mr. J. Keynes: R.H.S., Sept.* 2.

Dahlia John McPherson [f.c.c.].—Very bright purple, shaded in the centre; large and full, with finely shaped florets.—*Mr. J. Keynes: R.H.S., Sept* 2.

Dahlia Sarah McMillan [f.c.c.].—A nicely-formed full and well-built flower, of a very pretty tint of lilac-rose.—*Mr. Rawlings: R.H.S., Oct.* 7.

Decabelone elegans [b.c.].—A curious Angolan succulent plant, nearly allied to *Stapelia*, having spiny erect angular stems, and drooping narrowly campanulate flowers, of a lurid greenish-yellow colour, dotted and streaked with reddish-brown.—*Mr. J. Croucher: R.H.S., Aug.* 19.

Dendrobium erythroxanthum [f.c.c.].—A singular species, bearing numerous clusters of small buff-orange flowers, in shape like those of Lapageria, and growing in numerous fascicles on naked stems.—*Mr. Denning: R.H.S., Aug.* 5.

Drosera glanduligera [b.c.].—A white-flowered rosulate Australian species, with obovate leaves, and large solitary blossoms; neat in growth, and free-flowering.—*Mr. W. Bull: R.H.S., Sept.* 2.

Drosera Menziesii [b.c.].—A small upright-growing species, very curious and interesting, with small peltate orbicular leaves, and rather large pink or red flowers.—*Mr. W. Bull: R.H.S., Sept.* 2.

Gladiolus Duchess of Edinburgh [f.c.c.].—Carmine-pink, with a purplish flame on the white throat; large flowers, and massive spike.—*Messrs. Kelway & Son: R.H.S., Sept.* 2.

Gladiolus James Kelway [f.c.c.].—Carmine-red, with white throat, striking in hue, of fine form, and very effective.—*Messrs. Kelway & Son: R.H.S., Sept.* 2.

Hollyhock Mulberry Gem [f.c.c.].—A bright glossy mulberry-coloured variety; a good addition to the group of dark-coloured flowers.—*Mr. W. Chater: R.H.S., Aug.* 19.

Hollyhock Rose Supreme [f.c.c.].—Bright rose, large and full in outline, and also striking in colour.—*Mr. W. Chater: R.H.S., Aug.* 19.

Kniphofia McOwanii [f.c.c.].—A pretty dwarf-growing species, not much exceeding a foot in height, the leaves channeled, the flowers orange-red, on short spikes; the plant had been in flower for three months; useful as a dwarf grower.—*Mr. Green: R.H.S., Oct.* 7.

Nerium Oleander, New Red [f.c.c.].—A fine deep rosy-red-flowered variety, large in size, and likely to make a fine decorative plant for the conservatory.—*Messrs. E. G. Henderson & Son : R.H.S., Sept.* 2.

Odontoglossum maxillare [f.c.c.].—A dwarf-growing species with pearly-white flowers, having reddish-brown spots on the base of all the segments, the lip being entire and stained with yellow.—*Mr. Shields : R.H.S., Sept.* 2.

Œceoclades guineensis [f.c.c.].—A pretty and distinct terrestrial tropical orchid, the flowers having narrow sepals and petals, and a large, broad, rosy-lilac lip.—*Mr. W. Bull : R.H.S., Sept.* 2.

Selaginella lepidophylla [f.c.c.].—The Resurrection plant—a species of Club-moss, with flat branches of a deep bright green colour ; remarkable for rolling into a ball when dry, and opening again on the application of moisture.—*Messrs. E. G. Henderson & Son : R.H.S., Sept.* 2.

Solanum quitoense [f.c.c.].—A large-leaved handsome species, the leaves of a bright velvety green, with hairy purple-tinted veins ; fine for conservatory or sub-tropical work.—*Messrs. Veitch & Sons : R.H.S., Sept.* 2.

Zygopetalum Sedeni [f.c.c.].—A pretty hybrid, bred from *Z. maxillare* crossed with *Z. Mackayi ;* the petals being dark brown, and the lip bluish-purple, with a curiously plaited crest.—*Messrs. Veitch & Sons : R.H.S., Aug.* 5.

## PHILADELPHUS GORDONIANUS.

THE names of Syringa and Mock Orange are as familiar to one's ear, as the plants represented by them are beautiful and fragrant. The genus, moreover, is perhaps as universally known by the general public, as are many genera which include in their number some one or more native species, which the Mock Orange genus does not. By reference to the Mock Orange genus, be it understood, I do not mean the Syringa of science, though Syringa is one of its popular names ; for the Mock Orange, technically speaking, is no Syringa at all ; it is not a Lilac, and it is the Lilacs that constitute the genus *Syringa.* Whence the popular error of calling the *Philadelphus* a Syringa comes, I know not, though I can aver that it is of long standing. I readily admit that the name, derived from *syrinx*, a pipe, given originally to the Lilac in reference to its hollow pithy stem, would apply with even greater force to the wood of the Mock Orange. As, however, Botanists have long claimed for the latter the name of *Philadelphus,* more need not be said than to express a hope that in time we may see the popular error dispelled. Even the commoner varieties of the Mock Orange are extremely beautiful. In regard to their fragrance, Mason said :—

> " The sweet Syringa, yielding but in scent
> To the rich Orange."

And referring to the purity of their showy white flowers, I perceive, by a quotation beside me, that Cowper describes them as " ivory pure." Again, referring to old gardening lore, we are told, " The leaves taste like fresh cucumbers, and are thence sometimes used to flavour spring salads !"

The plant to which I would especially draw attention by these few notes, is the species known as Gordon's Mock Orange, or *Philadelphus Gordonianus*, the flowers of which are double the size of the ordinary kind, while the shrub itself is a very much stronger grower, besides possessing the merit of blooming quite a month later, and thus affording a very pleasing succession. The blossoms of this species, in consequence of their greater size, afford a very beautiful illustration of Cowper's allusion to "ivory" whiteness.—William Earley, *Valentines.*

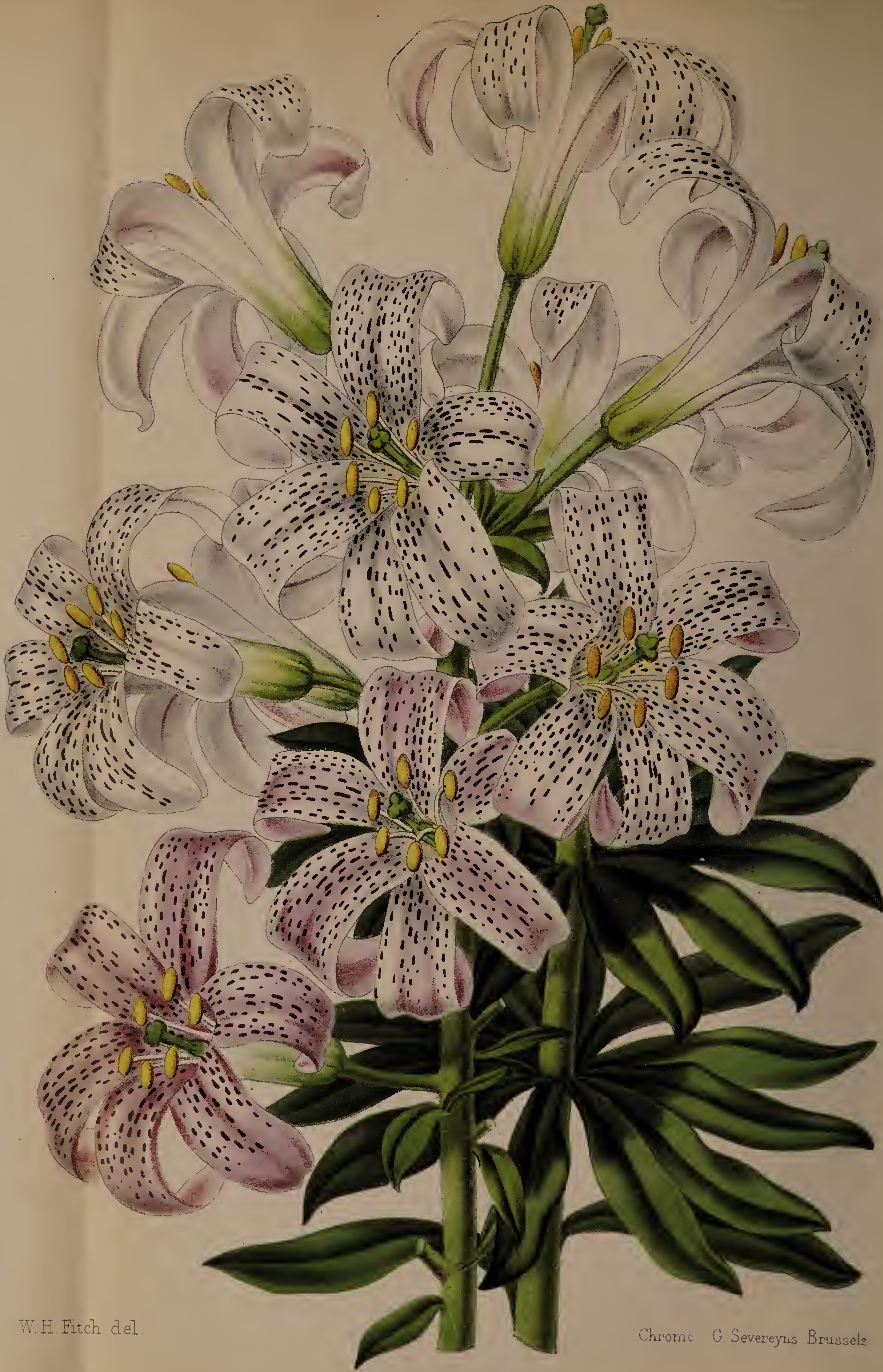
## NEW HYACINTHS.

ONE very natural result of the granting of Certificates to New Hyacinths, and one, in fact, which was mainly in view when the practice was established, has been the introduction of many new varieties, and amongst these there have been several which are exceedingly promising, both on the score of distinctness and merit. True, the practice has also another effect, that of increasing the price of novelties beyond the level which might have been fixed had there been no special demand for them; but this is in the very nature of things—novelties must be paid for as novelties till they find their commercial level, and this they are some years in doing in the case of Hyacinths.

That the gains of the past few years, some portion of which we must owe to the stimulus of Certificates, have been considerable, will be at once seen when we glance at a few of the names of the novelties which have been selected for reward. They may be divided into two groups,—those in which the vigour of the plant and the size of the bells have been increased, and those which show improvement or novelty of colour. Of the former, *Princess Louise*, *Mary*, *Anna*, and *Mr. Plimsoll*, single whites, and *Minister Thorbeck*, *Cavaignac*, *Mazzini,* and *Prince of Wales*, single blues, are examples; while of the latter, *Von Schiller* and *Marquis of Lorne*, single mauves, *Lord Mayo*, single violet, *Lord Melville*, single dark blue; and *Sir Garnet Wolseley*, single blue, the latter three with white eyes; and *Quirine Christiné*, *Lady Tuyll*, and *L'Ornement de Rosa*, all pale rosy tints marked with pink stripes, are illustrations.

Messrs. E. H. Krelage and Son, of Haarlem, who are well known as extensive growers of Hyacinths and other Dutch bulbs, have issued a list of New Hyacinths for the current season, their production being, no doubt, the result of the practice of granting Certificates, to which we have alluded. As regards their quality, they state that though they do not venture to say they surpass all the old varieties, yet they think they may honourably take rank by the side of those already known. "Their value as articles of commerce cannot be fixed before further trials have been made." The novelties thus offered are, as usual, composed mainly of single flowers, but it would seem that attention is also being directed towards the improvement of the double-flowered class.

It is somewhat remarkable that amongst the single-flowered new sorts offered in this list, there are no Whites, but as the class has been well replenished during the last year or two, they can the more readily be dispensed with. The Single Reds comprise *Max Nisson*, bright red, with pale eye; *Van Huysum*, bright red, with dark lines; *Rachel Ruysch*, dark rose, with bright red lines; and *Daniel Seghers*, light red, with darker lines. The Single Blues are more numerous, and consist



W. H. Fitch del.

Chromo G. Severeyns Brussels

Lilium Washingtonianum. purpureum.

of *General Moltke*, bright porcelain, and forming a beautiful spike; *Karl Immerman*, clear blue, with dark lines and shading; *Sieraad van Flora*, blue, with broad dark violet lines and light eye; *Justus von Liebig*, black-blue; *General van Swieten*, black-blue, with black shading; *Emilia Ingham*, dark purple-violet, with black lines; *Bourguemaître de Gand*, very dark violet-blue, with black stripe on each segment. The SINGLE YELLOWS consist of *General Köhler*, clear bright yellow; *Gustave Doré*, bright yellow, and a beautiful spike, late; *Alma Tadema*, bright yellow, with darker lines.

Amongst the new double-flowered varieties, the class of DOUBLE YELLOWS would appear to have obtained the greatest acquisition in *William II.*, a deep yellow, striped with orange, and with very double bells. The varieties we already possess in this group are of a very inferior character, and it is to be hoped that the high price set upon this novelty indicates quality rather than a limited stock. The DOUBLE BLUES comprise *President Grant*, dark blue, with dark, almost black, lines on the segments; *President MacMahon*, very double, dark blue, marked with violet lines, and paler margins; and *Bloemhof*, very double light blue, marked with dark lines. The DOUBLE REDS are augmented by a semi-double variety, called *General Verspyck*, which has pale rose-coloured bells, marked with dark stripes. This is a large number to emanate in one season from one establishment; let us hope they may contain at least some that will prove to be permanent acquisitions.—T. M.

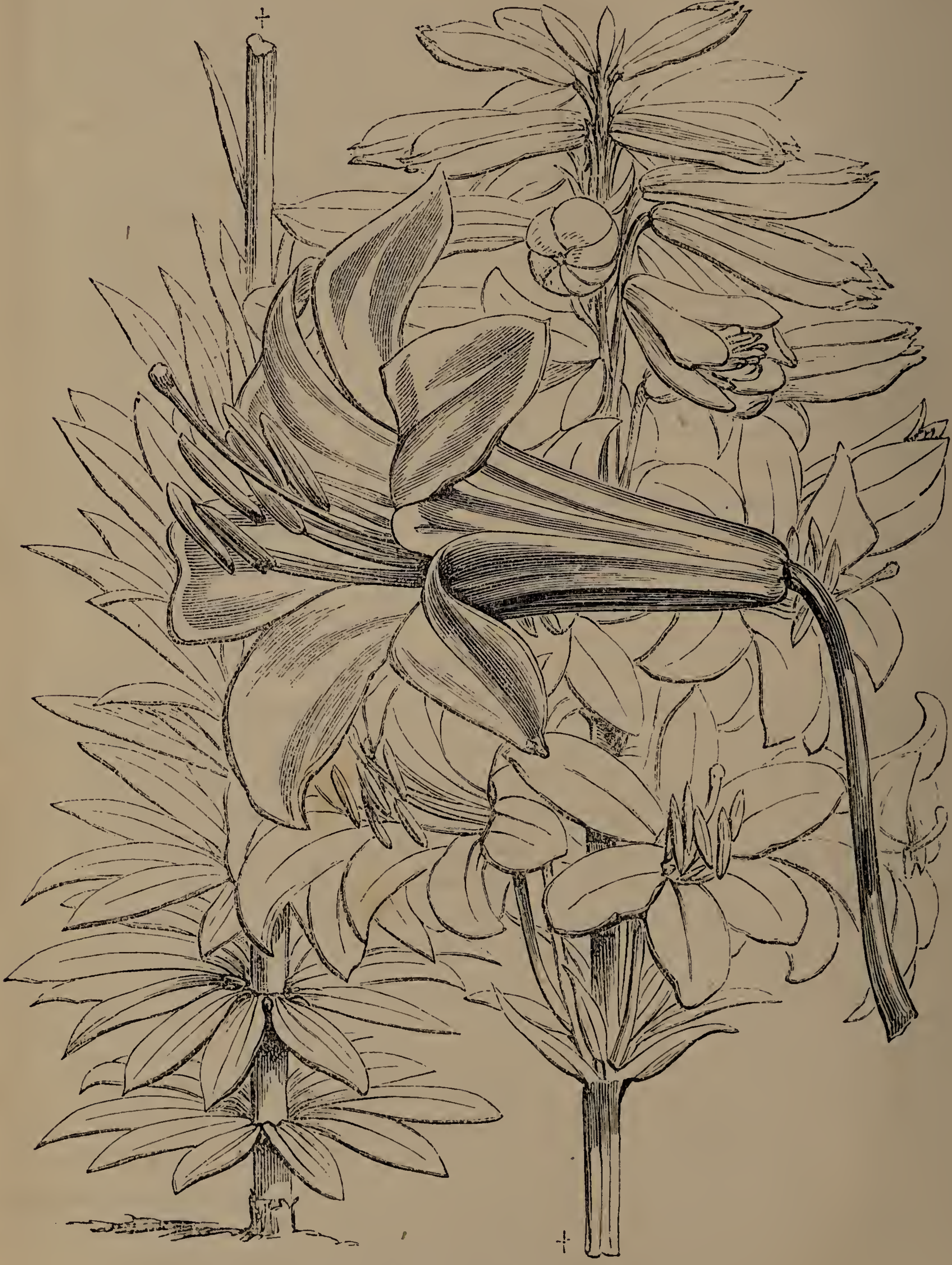
## GARDEN LILIES.—CHAPTER VII.

RESUMING our enumeration of the Lilies belonging to the group of Eulirion, we have still one or two extremely interesting species to notice—namely, *L. Belladonna*, and *L. Washingtonianum* and its variety *purpureum*.

14. LILIUM BELLADONNA.—This Lily is known to us only from the account given by Mr. Baker in the *Journal of the Linnean Society* (xiv., 232), where it is mentioned as being cultivated by M. Leichtlin. It is described as probably a garden hybrid between *L. speciosum* and *L. longiflorum*, having the habit of the former, but flowers resembling *L. candidum*, only of a reddish colour (rubellum), instead of white. It grows a foot high, or more, with slender terete smooth green stems; the leaves, about twenty in number, being smooth, lanceolate acuminate, 1½ in. to 2 in. long, shortly stalked, and somewhat distant. The flowers are from one to three in number, the upper erect, the lateral ones horizontal; the perianth is broadly funnel-shaped, 3 in. long, stained with red throughout, except at the exterior base, where it is tinted with green, the segments oblanceolate, unspotted, the inner ones broadest. The stamens are four times shorter than the perianth, with narrow reddish anthers; and the style is slightly declinate, longer than the stamens, and terminated by a small stigma.

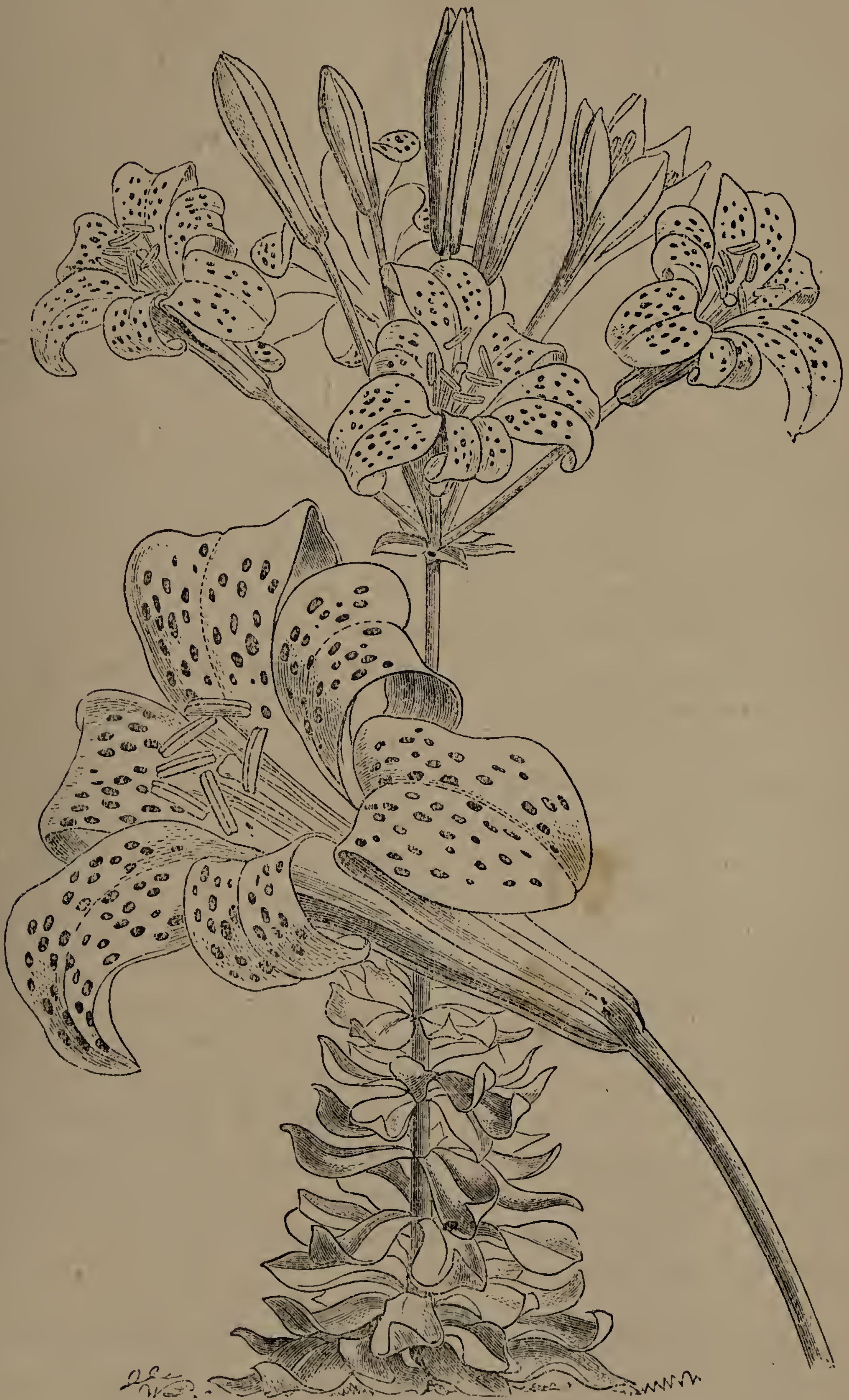
15. LILIUM WASHINGTONIANUM (*Flore des Serres*, tt. 1975-76; *Gartenflora*, t. 710).—A beautiful sweet-scented Lily, with erect terete stems 3 ft. to 5 ft. high, and which are glabrous like the rest of the plant. The leaves are nar-

rowly oblanceolate, undulated, one-nerved, 4 in. to 5 in. long, and from ½ in. to ¾ in. broad, in whorls of from ten to twelve, the upper whorls consisting of fewer



LILIUM WASHINGTONIANUM.

and smaller leaves, the uppermost leaves becoming scattered. The flowers have as yet in the cultivated plants been confined to umbels of three or four together, but in the wild plant not unfrequently are from twelve to eighteen in number, and form a dense raceme a foot in length, with lanceolate bracts half as long as the erecto-patent peduncles; the perianth is funnel-bell-shaped, becoming freely expanded, the segments obversely lance-shaped, spreading and recurved at the tip, white, dotted with red (according to the figure and de-



Lilium Washingtonianum purpureum. (See Plate.)

scription published by Regel), or rosy-pink and scarcely at all spotted (according to Van Houtte's figure), the inner ones somewhat broadest, narrowed gradually to the base, and entirely without hairs or papillæ on the face of the claw. The stamens are very much shorter than the perianth, and terminated by yellow anthers, five to six lines long. The style is 1½ in. to 2 in. long, a good deal curved upwards towards the point. The flowers are produced in July.

This fine and very distinct Lily inhabits the western slope of the Californian Sierra Nevada, along the watershed of the streams that run into the Sacramento. According to Professor Wood, it is found in woods here and there from the Yosemité to the Columbia, and is well known to the miners, who recognise its superior qualities, and call it the Washington Lily. Our woodcut, from a drawing by Mr. Fitch, is borrowed from the *Gardeners' Chronicle.* The credit of introducing the plant into Europe belongs to M. Roezl, by whom it was sent to M. Leichtlin.

L. WASHINGTONIANUM PURPUREUM, of which a coloured figure is annexed, prepared from specimens bloomed by G. F. Wilson, Esq., of Weybridge, is a beautifully tinted variety of the foregoing, described as being smaller in stature and more slender in habit, with a stem of 1 ft. to 1½ ft. high, furnished with oblanceolate leaves from 1 in. to 1½ in. long, and crowned by a raceme of from four to eight or more very handsome flowers. The perianth is bell-funnel-shaped, with the segments very much reflexed, white stained (more deeply in the older flowers) with wine-purple, and dotted all over with minute spots of blackish-purple. It also flowers in July.

The introduction of this variety is due to Mr. W. Bull, by whom it was imported, and distributed in some quantity at Stevens' Auction Rooms, in the latter part of last year, under the name of *L. purpureum*, which was attached to it, in accordance with the descriptions received from California, where it is found in the Yosémite Valley. Mr. Bull observes that he has "never found *L. Washingtonianum* to bloom in the precocious way that this variety does; the bulbs, moreover, are different. Another distinction is, that *L. Washingtonianum* grows 6,000 ft. above the level of the sea, where the ground is covered in winter with from 15 ft. to 20 ft. of snow; whereas *L. Washingtonianum purpureum* is found in Humboldt county, in a climate of perpetual spring. The flowers are fragrant, and from twelve to sixteen are produced on a stem." The accompanying woodcut, from the *Gardeners' Chronicle*, represents a small specimen bloomed, and exhibited at South Kensington, by Messrs. Veitch and Sons, and shows the symmetrical habit of the plant.—T. MOORE.

## EVIL EFFECTS OF TREES IN HEDGE-ROWS.

HOWEVER ornamental trees in hedge-rows may be, they are not only injurious to agricultural crops, but are often ruinous to the fences. This is sufficiently proved by the gape seen in hawthorn fences under trees, especially where the trees are numerous and not pruned up. The effect produced by some kinds of trees is, however, more detrimental than that of others, as in the case of the dense shade of Beech and broad-leaved Elm, while the lighter shade of Oak and Ash does less damage. The searching and spreading roots of the Ash, however, not only affect the growth of the fences, but that of the adjacent crops; while the more directly descending roots of the Oak seem to do less harm than those of any other deciduous tree.

Doubtless the barbarous plan of pollarding trees in hedge-rows arose from the circumstances just mentioned, in connection with the utility of their tops as fire-wood. In any case, however, whether in hedges or in park scenery, they are most unsightly, especially to lovers of trees in their natural state of growth. I trust that this remark will be enough to free me from the blame of being like too many farmers—having no taste for the beauty of trees. If not, I instance another. I once inquired of a Shetland man what objects took his attention the most on his first arrival in this country. He said, the beautiful trees; and this, no doubt, because they were new to him, since there are no trees worth notice in his native isles. How different were his views of trees from that of a Fen man, who told me that trees and undulated land only obstructed one's sight!

As regards the fences introduced to divide land under tillage into fields, depend upon it there are none equal to Hawthorn kept shorn or clipped, for thus treated they become thick and close, and afford better shelter for cattle, as well as for checking the progress of the sweeping blasts across the fields. In this part of the country, except in few instances, it is often otherwise, both large and small fields being enclosed by rough, unshorn hedges, studded with deformed trees.

Now, respecting the damage done to the crops by the shade and roots of such trees, I believe I shall not be far out if I say that it extends 6 ft. beyond the fences—at least, fully that space of land hardly pays for culture and seed, especially in small fields. I once knew a good landlord who was fond of trees on his farms. After his decease, the tenants complained to their new landlord of the losses occasioned by the shade of so many trees; some estimated it at five pounds yearly, others ten pounds, and so on. But he, being a shrewd man, took notes of what they said, cut down the trees, sold the timber, and added to their rents the amount of estimated losses. This they did not expect, but after a while, they found themselves gainers by the change.

I am well aware of what has been said, and truly said, respecting the beauty of our country scenery, when compared with the fenceless fields in some parts of France and Spain. This epithet, however, may apply in some measure to large tracts of land under tillage even in this country. Take, for instance, some open fields in West Norfolk, some of which are upwards of a hundred acres in extent. Now if there had been a few round clumps of trees planted in them, according to Brown's plan of adornment, to break the monotonous scenery, they would when aged have required no fencing-in, but they would have afforded shade for cattle in summer, as well as shelter from cold blasts in winter, and perhaps have taken up less space of ground than the deformed trees in the hedge-rows.

I wish it to be clearly understood that what I have said on this subject does not apply to trees in parks, because there they are their chief ornaments; nor to trees in grass pastures, neither to a few trees in nooks or corners about farmsteads, because these afford shelter. In fact, it is considered that the destruction of the natural forests in this country, as in other cases, has rendered our climate more bleak and the land more barren.—J. WIGHTON, *Cossey Park.*

## GARDEN GOSSIP.

A WOODCUT figure of the Lambton bunch of *Black Hamburgh Grapes*, mentioned at p. 231, with various particulars of the Vine, has been published in the *Gardener.* The weight of the bunch was 21 lb. 12 oz., and our contemporary remarks that "this is the most extraordinary production in the way of any fruit that has been recorded in the annals of horticulture." The Vine which produced this compound cluster was struck from an eye in 1869. It bore six bunches the second year after planting, one of which Mr. Hunter staged in his 1st-prize collection in 1872. It bore eight bunches in 1873, one of these being the heaviest black grape shown at Manchester, which weighed 13 lb. 4 oz., while the smallest of the other seven weighed 4 lb. This year it has borne five bunches—that mentioned above, which is compound, and one of 11 lb. 2 oz., of faultless symmetry, the remaining four weighing 13 lb. 13 oz. In the same house grew a Vine of Raisin de Calabre, or Calabrian Raisin, which bore a cluster weighing 15 lb., and five others scarcely less; and there were also immense Trebbianos of from 10 lb. to 12 lb., Gros Guillaume of from 14 lb. to 16 lb., very large Muscats, and Foster's Seedling of immense size and splendid quality. The soil, we are told, is a strong holding soil.

—— THE autumn *Shows of Fungi* keep up with unabated interest. At that of the Woolhope Club, held in Hereford, which was very successful, a handsome presentation was made to Mr. Worthington G. Smith, "in pleasant memory of fungus forays, assisted by his experience, illustrated by his pencil, and chronicled by his pen." The show at South Kensington was a smaller exhibition, but excited a good deal of interest amongst the visitors.

—— THE *Vicomtesse Hericart de Thury Strawberry* may be especially recommended as a most prolific bearer, either forced or in the open ground. It ought to be more extensively grown, for those who have tried it report that none are equal to it as a general good cropper; while it remains longer in bearing than many other sorts, will also keep longer when ripe, and, as the flesh is firm, is well-adapted for travelling. The flavour, too, is most refreshing, having a slight acidity. As a forcing Strawberry it cannot be too highly recommended, being a sure setter, and that in a temperature which would prove fatal to Keens' Seedling, and many others. The plants after forcing may be beneficially used for making fresh plantations in the open garden.

—— THE handsome variegated-leaved plant, known as *Erythrina Parcellii*, is said to be the *E. picta* of Linnæus, a variegated variety of *E. indica*, of which there is a plate in Rumphius' *Herbarium Amboinense* (ii., t. 77). It is rare in Amboina, but occurs in several places in the eastern part of the Moluccas and Celebes. The custom of planting it near houses or temples, as mentioned by Rumphius, is general in the Fijian islands, according to Seemann, who says:—"The flowering of the Drala *(Erythrina indica)*, which takes place about the end of July or the beginning of August, is the general sign for planting the yams, and one of the natural phenomena upon which the Fijian Calendar is based. For this reason the tree is found near almost every village, either wild or planted. The seeds are used by children for toys, and by the heathen priests to cover the so-called oracle boxes." This species is commonly cultivated throughout India.

—— THE *Pascalia glauca* is a fine herbaceous plant, somewhat resembling a Sunflower, but having an elegance of character in the stem and leaves, a gracefulness and length in the flower-stalk, and a certain style of beauty about the buds and flowers not to be met with in any of the sunflowers. It was introduced from Chili many years ago, and is not a very robust plant, but has one or more stems a few inches high, from which four or five branches are protruded, each surmounted by a flower. These begin to open about the end of June, and frequently remain till September. It has a tendency to throw underground runners, and to come up at a distance from the parent stem, which often leads to its accidental destruction; those young shoots make good flowering plants.

—— At the International Show at Belfast, a new *Double-flowered Pansy*, *Lord Waveney*, which is highly spoken of, was shown by Messrs. Allan and Son, of Ballymena. It is a fine deep purple flower, perfectly globular in shape, and judging from the plant shown, a very abundant bloomer, the flowers large in size, and well thrown up above the foliage. Messrs. Allan state that they believe it came in a batch of seedlings some three years ago, and, finding it much superior in richness of colour, abundance of bloom, size of flower, doubleness, and duration of time in flower, to the old double variety, they at once commenced to propagate it.

—— The *Variegated Pine-apple* (*Ananassa sativa variegata*) is a beautiful plant, not only for exhibition purposes, but also for the decoration of the dinner-table. Mr. Sage, at Ashridge, grows it rather largely for this purpose, the plants being especially handsome when in fruit, since, in addition to the fine white and green variegation, the bracts and all the central parts of the plant acquire a strong tint of bright red, which renders them exceedingly effective.

—— Amongst the free-flowering varieties of *Canna*, one of the best is that named *M. Celler*, which has been flowering in great beauty with Messrs. Standish and Co. during the past summer. It appears to have been raised from C. Bihorelli by M. Chrétien, and was sent out by M. Lemoine. It grows about 2 ft. high, has green leaves, and bears fine bold compact spikes of large deep crimson flowers of a very showy character. These two Cannas are most desirable varieties for general cultivation, either in beds or in the borders.

—— The *Pyracantha* (*Cratægus Pyracantha*) is beyond question the most brilliant of all evergreen shrubs for a wall in winter, when covered with its rich clusters of orange-scarlet berries. Fire Thorn, the meaning of its specific name, very well expresses the glowing colour of its fruit. The ordinary South European form is, however, said to be far surpassed by the variety crenulata, from the mountains of India, which has larger glossy leaves and vermilion-coloured berries. It is quite hardy in Britain, as it grows at an altitude of between 5,000 and 7,000 ft. on the Himalayan Mountains. It was introduced in 1818, and may be found in most nurseries.

—— We noticed lately, at Messrs. Lane's Nursery at Berkhamstead, some of the *Shrubby Ivies*, grown in pots, both as dwarf bushes and as standards, and which formed exceedingly interesting objects, very useful for many decorative purposes, such as the furnishing of halls or corridors, or for mixing with other plants in cold conservatories and greenhouses. Neatly grown into compact symmetrical specimens, they have a much more tasteful and pictural appearance than might at first be supposed, and are, in fact, remarkably effective.

—— A fine specimen of *Arundo conspicua*, one of the finest of ornamental grasses, the largest, and perhaps the most beautiful of the natives of New Zealand, has lately been flowering freely in the succulent house at Kew. Though suitable for planting in the open ground, it is also desirable in pots for the conservatory, as the graceful plumes last for months in the best condition. It would be a striking subject for exhibition. It seeds freely, and in this way plants may be produced in quantity. For its culture, rich loam is preferable; and while growing, especially when the flower-stems are rising, a shallow pan of water in which to stand the pot is of great benefit.

—— The *Florence International Exhibition* is said to have proved a financial success, the nett profit being £1,000. The disposal of this sum, to the best advantage for horticulture, is under consideration.

—— M. HOOIBRENK'S process for facilitating the *Fertilisation of Plants* has, according to the report of M. Beer, been successfully tried in the Botanic Garden, Vienna. The process consists in touching the stigma of the flower, just before it blooms, with a pencil dipped in honey, or, better still, with honey mingled with the pollen of the plant which is being operated on. The process has succeeded admirably, it is stated, on fruit-trees, and even on certain particular branches of trees which had never borne; on the portions thus treated, fruit formed in natural course, while other parts remained in their normal condition. The effect may be explained by supposing that the honey retains the pollen-grains on the stigma, and thus favours the formation of the indispensable pollen-tubes.

—— THE *Echeveria secunda glauca*, so useful as a decorative bedding-plant, though comparatively hardy, will only last through an exceptionally mild winter. A continuous rain, especially when the plants occupy a low wet position, does them much harm; and when frost succeeds rain, they become completely destroyed. The best way to winter it is to take off the side-shoots and off-sets in August, and plant them closely in shallow boxes, placing them in any out-of-the-way place where they can be kept free from frost, and pretty dry. Now that succulent plants are becoming to be so generally employed in decorative gardening, this valuable Echeveria has come to play a most important part, and it is in some cases necessary to winter it in large quantities. At Heckfield Place, Hants, the seat of Viscount Eversley, an ingenious method of wintering the Echeveria has been resorted to. On the south front of some of his greenhouses a lean-to pyramid of soil was thrown up, 9 in. to 12 in. deep at the base, tapering at the top, and about 3 ft. in width. The chief part of this bank was made up of cinder-ashes, with a covering of soil, and the exterior was built up of Echeveria secunda glauca, laid on their sides, in rows close together, the roots covered with the soil next the ashes. In this way a large number can be stowed away and wintered with safety. In rainy weather the water falls away from the leaves and does not rest on them; the plants are always comparatively dry, and thus the injury from frost is reduced to a minimum.

—— MEDICAL authorities ascribe to the *Tomato* the following very important qualities :—1. The Tomato is one of the most powerful aperients of the liver and other organs; where calomel is indicated, it is one of the most effective and the least hurtful medical agents known. 2. A chemical extract will be obtained from it that will supersede the use of calomel in the cure of disease. 3. Diarrhœa has been successfully treated with this article alone. 4. When used as an article of diet, it is almost sovereign for dyspepsia and indigestion. 5. It should be constantly used for daily food; either cooked or raw, or in the form of catsup, it is the most healthy article now in use. Tomatos may be preserved by slightly scalding and skinning them and putting them into bottles; these being set in boiling water for a few minutes, and corked and sealed, the fruit will keep as long as desired, and if eaten when first opened will have the same taste as when just picked from the vines. A better way, perhaps, is to peel the Tomatos, boil them slightly so as to expel the air, and then put them in heated bottles and cork at once. All depends on the exclusion of the air. The more perfectly this is done, the longer the fruit may be preserved.

—— TWO kinds of Poplar, very common on the Continent, *Populus nigra* and *P. canadensis*, the latter the most prevalent, are easily distinguished at the early leafing period, a fact which may be turned to account by planters. *P. nigra* has dark green foliage, while its confrère *P. canadensis* has the leaves of a pale yellow-green, with a russet tinge. In groups of the latter, where specimens of the former happen to be dotted with it, the effect is described as striking. The same contrast is observable between *P. canadensis* and the Lombardy Poplar, which is by some regarded as a variety of *P. nigra*.

—— IF, after flowering, the decayed remnants of the *Double White Rocket* are cut away, leaving the flower-stalks intact, and these are then carefully bent down, and layered in some fine soil, they root readily. The consequence is, that very flowering-stem becomes a very strong plant by the autumn. The general rule is to cut the stems away, so as to strengthen the growth from the roots, in order to divide them in the autumn, but this plan is not unlikely to be useful to many who grow this fine summer-flowering perennial, and who would like to improve, or at least increase their stock.

## Obituary.

—— MR. WILLIAM MASTERS, of Canterbury, died on September 26, aged 78. He succeeded to the long-established nursery business of his father, which he carried on with as keen an interest from the scientific and artistic as from the commercial point of view. He acquired considerable reputation and an extensive practice in landscape gardening. The Canterbury Nurseries were at one time famous for their groups and collections of ornamental hardy trees and shrubs, for herbaceous and alpine plants, and for succulents. Mr. Masters was an occasional contributor to horticultural literature from the time of Loudon downwards; as a hybridiser and raiser of seedlings, his experiments were mainly devoted to Elms—of which an account is given in Loudon's *Arboretum*—to the *Althæa frutex*, Sweet Peas, Hollyhocks, and Hyacinths; and amongst vegetables, especially to Peas. He was formerly an alderman of the city, and served the office of mayor, but latterly, on account of infirmity, he withdrew from public affairs, retaining, however, the commission of the peace and the trusteeship of the city charities. In private life Mr. Masters was highly esteemed by those who knew him, not less for his talents than for his kind and amiable temperament.

## GARDEN WORK FOR NOVEMBER.

### FLOWERS.

FLOWER-GARDENS will now require a thorough clearing, if not already done, and tender foliage-plants, which have attained unimpaired vigour and effectiveness throughout the autumn months in such a remarkable degree, must now give place to the hardier types of embellishment. No favourable opportunity of planting the beds with Shrubs, Bulbs, and other spring-blooming plants should therefore be lost. Vases may also be very tastefully planted with Evergreens, and at little expense, for the great majority of these will now propagate freely from cuttings in the open ground; and as small plants in numbers are the most serviceable, a batch should be put in every autumn.

Herbaceous borders should be cleared and dug, planting out *Perennials* and *Biennials*. Those most effective of border-plants, the *Lilies*, should have immediate attention, dividing and replanting exhausted groups. They delight in a deep friable loam, thoroughly drained, which may be enriched with leaf-soil and rotten manure, adding sand if deficient; these gorgeous flowers are worthy of every attention in planting, and will stand for years undisturbed when once favourably established. The same remarks as to replanting apply equally to other kinds of roots, most of which are now out of sight, and liable to be forgotten; but by dividing entangled masses, we greatly increase their vigour and effectiveness.

*Dahlias* should be lifted as soon as the tops are destroyed by frost, cutting off the stems, and placing them, crown downwards, for a few days in an airy shed to dry; afterwards store them under the greenhouse stage, or in a dry cool place, where they will not be likely to shrivel. The loss of gaiety in our parterres at this season should, as far as possible, be compensated for by extreme order, keeping the walks free from weeds, removing falling leaves, and frequently rolling both grass and gravel.

*Shrubberies:* This is the most favourable season of the year for transplanting Evergreens. In carrying out premeditated alterations, strive to introduce telling masses of colour at various points, as well as effectively to distribute groups of the various forms available; both aid greatly in giving a distinctive character to the planting. A free intermixture of flowering shrubs is indispensable. What is more charmingly pretty than a mass of *Berberis Darwinii*, with its rich orange-yellow blossoms; or the snowy purity of the double *Cerasus*, contrasting with the fresh verdure of renewed vegetation? Timely attention must be given to the covering of all tender plants, bearing in mind that much damage often results from accumulated damp in the protecting materials. A slight covering of spruce or other branches is all that is necessary for most things, but whatever the nature of the materials employed, dryness must be secured.

*Roses* must have the ground for them thoroughly prepared, by trenching and working-in a good proportion of cow-manure. If the soil is light, a good dressing of heavy loam should also be given, as the Rose delights in a firm heavy soil. Roses should never be lifted until the leaves have fallen; thousands of them annually are weakened or killed outright through evaporation, and the consequent shrivelling of the bark, often aided by exposure in transit. The Rose delights in a firm soil, and consequently must be planted firmly; yet nothing is more injurious than placing their roots in heavy soil, and treading it into a puddle; the ground must be in good working order at the time of planting. *Brier stocks* should now be planted; also cuttings of *Manetti* for budding. Cuttings of Roses will now root freely, choosing firm pieces about 6 in. in length, and inserting them in a piece of ground of a sandy nature; if they can be afforded the protection of a spare frame, so much the better; if not, mulch the surface.

*Conservatory:* As winter approaches bright colours in-doors are most desirable, and merit special attention. Early forced *Camellias* now coming into bloom must have the soil kept in a healthy state of moisture, more particularly plants that are pot-bound will be much improved when the buds are swelling by applications of manure-water; that from cow, sheep, or deer-dung, with soot mixed in, being excellent for the purpose. The general stock of these should be comparatively at rest. *Chrysanthemums* will now be in bloom, and must have attention in watering, giving free ventilation, for they quickly succumb in a close murky atmosphere. Effective as these are, they should at all times be used in moderation in conservatory arrangements, as there is no lack of more elegant subjects. Use fire-heat in these structures moderately at present, as the majority of plants now in them do not benefit by fire-heat.

*Greenhouse Plants: Heaths* must be afforded a free ventilation and strict attention in watering; the soft-wooded varieties, which are now coming into bloom, must be freely watered and encouraged in a genial temperature. Continue to stake and tie *Azaleas* and other plants that require it. *Cinerarias* and *Calceolarias* dislike dry heat, and must be afforded a cool temperature near to the glass, taking care to keep them free from mildew by sulphuring, and from green-fly by fumigating, and shifting them before they become pot-bound. *Pelargoniums* will now occasionally require fire-heat to ward off frost and damp; water carefully, not allowing the plants to suffer, and shift on such as may require it, keeping under all insect pests. Lilies should be potted at once, using a sound fibrous loam, and thoroughly-drained pots.

*Stove:* Keep *Palms* that are now making growth freely well supplied with water; those that are intended for decorative purposes must be kept so far hardy as not to suffer by exposure, as must also *Ferns* intended for this purpose. Encourage all plants in a growing state; keep creepers under subjection; wage a persevering war of extermination upon all insect pests.

*Forcing-house:* Some of the most forward plants of *Azaleas*, such as *amœna*, *indica*, *alba*, *Fielder's White*, *vittata*, and the varieties of *punctulata*, &c., which have a disposition to bloom early, should now be placed in heat, if not already done. A batch of the earliest *Bulbs* may now be introduced; and such subjects as *Lily of the Valley*, *Spiræas*, early blooming *Rhododendrons, Lilacs*, *Deutzias*, *Roses*, &c., bearing in mind that the successful forcing of such subjects mainly depends on the previous preparation and maturation of the wood and crowns; the buds must be thoroughly ripe to insure success.

*Bedding-plants* must have free ventilation during fine weather, as they suffer more from confined damp than any other cause. Hardy subjects, such as *Carnations*, *Hollyhocks*, &c., should have abundance of air during fine weather, while protecting materials should be at hand in case of frost.—G. WESTLAND, *Witley.*

## FRUITS.

*Vinery:* If the early house was closed at the end of last month, a little fire-heat may now be given, should the weather be cold and the nights frosty, in order that the night temperature may not fall below 45°, and the day temperature may range about 60°. Keep up a moist atmosphere by sprinkling the pipes and floor of the house frequently, the Vines being syringed every day as well; give air in bright weather, and raise the temperature 5° by the end of the month. Prune and clean the succession Vines as soon as the leaves have fallen.

*Cherries and Plums:* All *Pot Plants* intended for forcing should be looked over, to see that the drainage is perfect, and any that may require more pot-room should now be shifted. This is the best time to pot young trees, in preparation for forcing another season; after potting, plunge them in a bed of leaves, to protect them from frost and to excite root-action.

*Peach-house:* Finish tying the trees in the early house; put on the sashes, and surface the borders with a mixture of fresh loam and dung. If early peaches are required, the house should be closed at night; but do not apply fire-heat for the present, except the nights are cold and frosty, when a little heat may be given towards the end of the month.

*Strawberries:* Those intended for *early* forcing had better be placed under glass in a cold frame, or the pots laid on their sides at the foot of a wall—either plan will answer, the object being to secure the plants against heavy rains, so that they may *dry* before the forcing time arrives. All others should be placed in their winter quarters, either stacking them sideways in coal-ashes, or packing fern or litter round the pots, to protect them from frost.

*Pines:* Keep a steady bottom-heat of from 75° to 80° to the succession plants, and a night temperature of 65°, with a rise of 10° to 15° during sunshine. Give air at every favourable opportunity, but close early in the afternoon. Less water will now be needed. Plants swelling their fruit should be kept a little warmer than the succession plants. Keep the atmosphere moist, and give air every mild quiet day. Bear in mind to have plenty of leaves in readiness, for use by and by.

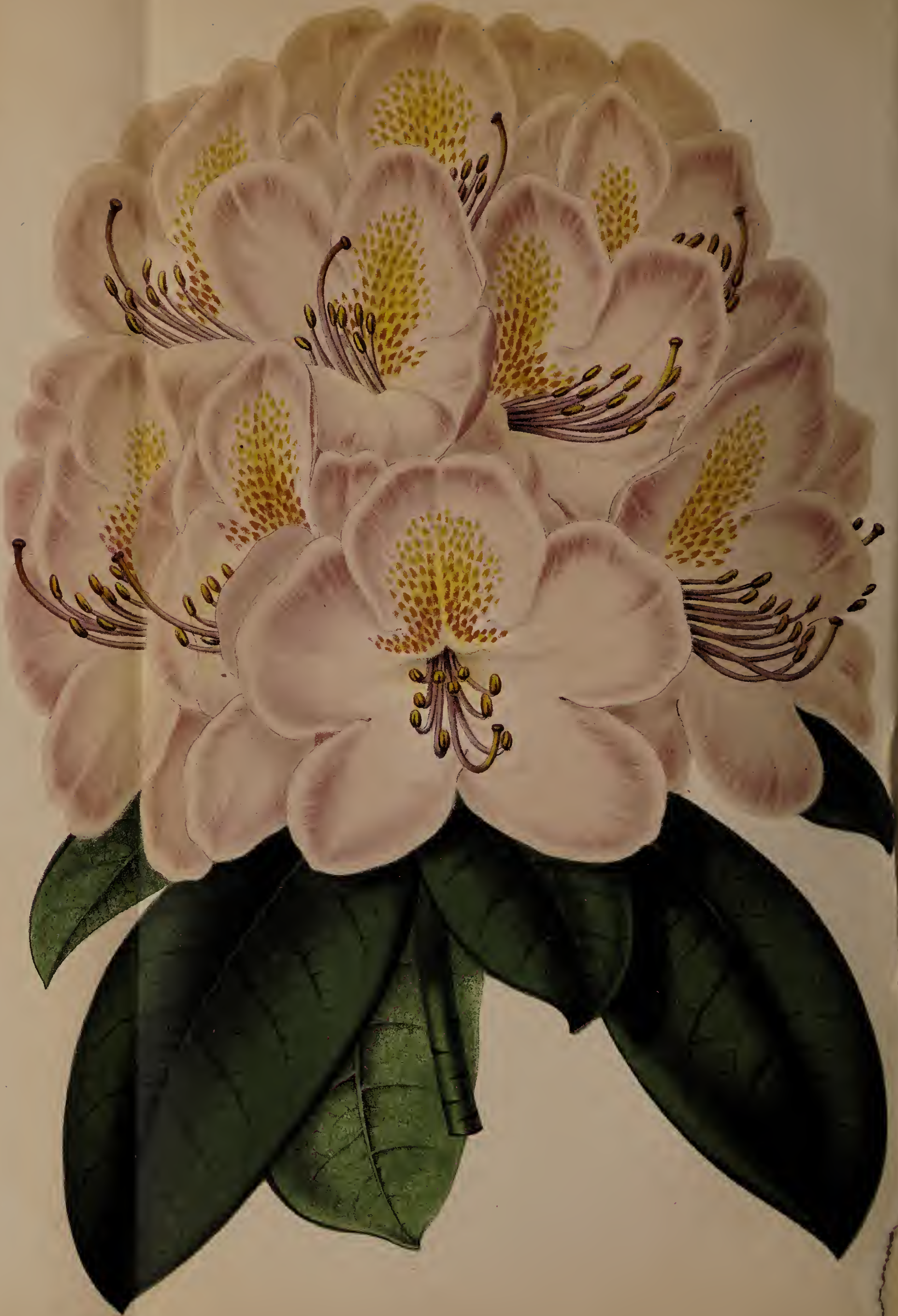
*Hardy Fruit:* During this month is, perhaps, the best time to *Root-prune* any fruit-trees that are growing too rank or are otherwise unfruitful. If large trees are to be operated on, only one side should be done at a time, by cutting a trench half way round the tree, reserving the other side till another time. In filling up this trench, use some fresh loam and dung with the old soil. Root-pruning young trees is a simple matter, and consists in merely running the spade round the trees, about 2 ft. from the stem. All *Fruit-trees* may now be planted, or large trees shifted. In the renewal of Wall-trees, where the borders are old, the ground should be well trenched to the full width of the border, and fresh loam and manure mixed with the old soil as the work proceeds; mulch the trees after planting with rotten manure, to encourage them to make roots at once. Go over *Peach* and *Nectarine* trees with a soft broom, to remove a portion of the leaves, that the wood may get well ripened. Any other fruit-trees that have shed their leaves may be pruned. Air will still be required to the late fruit store till the sweating process is over. Look over the fruit frequently, and remove all those which are going to decay. If any late *Apples* or *Pears* remain on the trees, they should be gathered at once.—JOHN POWELL, *Frogmore.*

## VEGETABLES.

Speculative crops, such as *Peas* and *Broad Beans*, should be sown in this department about the 12th or 15th of the month. We call them speculative or chance-crops because, in many soils, such as over-tenacious or moist ones, there is a probability that, though seeds are sown now, the crop will be cut off by severe weather, should it ensue. Nevertheless, it is customary for all good gardeners to accept this risk. The sorts most to be relied on are such as *Carter's First-crop Peas* and the *Early Long-pod Beans*, both being planted somewhat thickly.

Finish storing all kinds of roots, such as *Carrots, Beet*, *Salsafy*, &c., taking all up carefully, and especially the *Beet*, without injuring the roots. Store the former away in clamps in the open ground, in a similar way to that in which Potatos are treated. The latter should be packed neatly into sand, with the natural apices outwards, and so exposed that the air can get at and around them freely. We repeat our advice to leave *Parsnips* in the ground in the position in which they grow until required for use, as they keep so much better and are so much tenderer. As ground becomes vacant, it may be advisable to make up other beds of Cabbages, to succeed such as have been planted previously for the more permanent spring crop.

Well mould-up all *Cabbages*, also late *Broccoli*, and *Kales*, by drawing two or three inches of soil up around the stems on either side, as a protection against severe frosts, should they visit us, and to keep them from wind-waving and rocking during hard frosty weather. *Lettuces* and *Endives* in frames and under all kinds of protectors should have all the air possible given daily, and indeed nightly during all mild weather. The soil should be occasionally stirred between them, and all kinds of litter or decay removed periodically. As many require *Sea Kale* for use at the earliest possible moment, it will be necessary to remove all the old leaves from the crowns during the earlier days of the month. Subsequently, after the crowns have had time to ripen off and rest awhile, they may be taken up and planted either in baskets, boxes, or the spare spaces in a mushroom-house, and where they can be kept dark and away from the outer air. Here the young blanched shoots will form quickly, if an average warmth of 65° to 80° can be maintained. Otherwise, the usual forcing-pots may be placed over the crowns, and a sufficient coat of fermenting material, whether of tree-leaves or stable-litter, packed upon them to maintain such a necessary degree of heat. *Spinach* crops should be carefully hoed through, and all large gross leaves gathered for use. *Turnip Radishes* may be again sown during a mild period. Place a thin layer of straw over the seeds subsequently, and maintain it there until the plants have formed, when it will be necessary to remove about half, so as to give them more air, and to harden them. So soon as the roots become large enough for use, should a sharp period ensue, more litter may again be placed upon them for protection. During frosts, or while the soil is so frozen as to bear the weight of a wheelbarrow, do not miss the opportunity to wheel manure upon all vacant ground, that it may be worked in when such spaces are dug or trenched, as the case may be. All kinds of borderings, such as Box, &c., may be transplanted or renovated at this season. In a word, the chief object before the cultivator, who would succeed the year throughout, should be, at this, the dullest and least busy season, to get all his jobs as far advanced as possible.—WILLIAM EARLEY, *Valentines.*



W. H. Fitch del. Rhododendron Vauban. Chromo G. Severeyns Brussels

# RHODODENDRON VAUBAN.

WITH AN ILLUSTRATION.

We have at various times alluded to the fine varieties of Hardy Rhododendrons to be met with in the Knap Hill Nurseries of Mr. Anthony Waterer, which have a world-wide reputation for American plants. These grand varieties are of a peculiarly hardy race, the outcome of careful cross fertilisation through a long series of years, some of the results being, perhaps, brought about by the exigencies of the situation. The grounds at Knap Hill devoted to these American plants—a natural peat-bed—are low-lying, and hence much exposed to damage from spring frost, which so tells upon the growth of tenderer breeds of Rhododendrons, that Mr. Waterer has in self-defence, so to speak, been compelled to look to the production of a hardy race. It is also a standing axiom at Knap Hill that a Rhododendron, being a hardy evergreen shrub, should carry bold healthy-looking foliage throughout the year; and this, in fact, is regarded as of more importance to the planter of ornamental American gardens, than the acquisition of a few shades more of depth or brightness in the colour of the flowers,—not that this is despised or neglected, but it is not allowed to have undue preponderance in the breeding and selection of seedlings.

Rhododendrons are plants of slow increase, and consequently it is not every year that a conscientious grower, who will let out nothing but what satisfies such rigid laws as those we have hinted at, will have a batch of new Rhododendrons to put forth. The present year is, however, marked by the sending-out of a set of Knap Hill Rhododendrons, among which occurs the variety VAUBAN which we now figure. It is a fine, showy, telling variety, with good foliage, and grand trusses of distinct rosy-lilac flowers, of a peculiar and very pleasing tint, which is set off by a finely blotched upper segment. It is one of the well-proved hardy forms, and a late bloomer, so that there is comparatively little risk of its flowers being cut off by spring frosts, which no doubt sometimes commit great havoc amongst the early-flowering varieties.

With this will be sent out some other sorts of equal merit, and showing considerable diversity of colour. Their names are:—*James Marshall Brooks*, perhaps one of the most effective yet raised—a rich scarlet, spotted with bronze on the upper segments, very fine in colour, and distinct in character. *Lady Annette de Trafford*, cream-coloured, with a patch of distinct chocolate blotches; a very pleasing variety. *Mrs. Frederick Hankey*, salmon, richly spotted, and of a charming hue. *Mrs. Shuttleworth*, rosy scarlet, white in the centre, the upper segments much spotted with black dots; a very beautiful and distinct variety. *Vauban*, the variety we now figure, is remarkable for its soft reddish-lilac hue, and the bold patch of yellow spots, as well as for its very fine truss, and excellent habit. The hardiness of the Knap Hill Rhododendrons may be traced back to the considerable amount of the blood of *R. catawbiense* which has been infused into the breed, this species affording not only a vigorous habit, but bold foliage, and grand trusses of flowers.—T. MOORE.

# THE SPRING TREATMENT OF WALL FRUIT-TREES.

IN the following observations I have endeavoured to set forth, by a practical illustration, the ideas that are sometimes entertained regarding the "assisting" of nature, more especially in reference to the protection and judicious management of Wall Fruit-trees. The winter of 1873-4 may be said to have been mild and open, but as the days lengthened we were visited by the usual cold, cutting east and north-east winds, and towards the end of April, extending thence into May, the weather was very cold and bleak, but usually dry. Cold storms of hail and sleet, followed by frosty mornings, were, however, flying about in some localities; and when vegetation came to be caught by such a storm late in the afternoon or evening, and left for the night wet and unprotected, it was, as usual, very much in danger of being destroyed or greatly checked or injured by the morning's frost. I have myself had many a long night's work over this, looking up old stores placed in readiness for such an emergency, and never fearing very much about the cold or its injurious effects on vegetation so long as the atmosphere continued dry. When these storms occurred in the daytime, so that the sun and wind sprang up in the afternoon, and left vegetation dry by sunset, there was but little fear of any extensive damage being done to fruit or tender vegetation. Nevertheless, the facts do not seem to be considered such by some gardeners, or if so, they do not follow the idea out in practice. Everybody remembers that last spring we had a long continuance of cold, ungenial, cutting winds, and many severe frosty mornings occurred even so late as May. I was confined indoors with a very severe illness from January till May; still, by reading the horticultural publications, I could not help being posted up in the facts, and as usual, not only interested in the matter, but fearful as to the results.

In May last, an old friend, and a gardener, too, of some note, from the vicinity of London, who had also been ill for some months, came down to stay in Exmouth, as recommended, for the benefit of his health. On May 5 he came to us with his wife, in a close comfortable fly, to take us for a drive through the well-protected Devonshire lanes, where the banks were covered with violets, primroses, jacinths, orchids, and numerous other lovely wild flowers—where the cuckoo, song-thrush, blackbird, sky-lark, wood-lark, and various finches and other warblers were wonderfully joyous and merry; while the rooks were cawing and feeding their squealing young, the carrion crow was croaking near the wood, and the magpie, jay, and jackdaw were chattering according to their wont. We much enjoyed ourselves, the sun shone gloriously, all nature seemed jubilant, but when we came to high ground, the wind was biting, and let us know from what direction it blew.

About half-past 3 p.m. we came to a somewhat noted garden. The gardener we all knew, and we went in to see him. "Ah!" he says, "glad to see you out again; a terribly cold, cutting, blighting wind, though, not much fit for you two invalids to be out in, I should think." We remarked that we were well protected, and took advantage only of two or three hours during the balmiest part of the day. "Well," I said, "how do the fruit-crops stand this long, late period of ungenial weather? It has been pretty dry, that's greatly in their favour." "Well, so it has," he replied; "and at present we have a good setting of wall-fruit; but the trees are terribly infested with aphis, curl, blister, &c." It was very true indeed; I saw that they were so, and I observed that under the trees the ground was very wet, and covered with curled and blistered leaves, and that the young shoots or branches on the trees were set full of fruit, from the size of a pea to that of a filbert, but getting very naked. "Yes," he said, "we are obliged to keep the engine at work to drive off the aphis. What a severe frost we had this morning, the severest we have yet had! it has cut down some of our potatos, French beans, &c., and some it has not at all touched." "Just so," I remarked, "it's always the case; and this fact we have observed in many places as we have passed on in our ride to-day; indeed, all my lifetime I have observed the same effects. This only shows the difference of a drying harsh wind passing over dry dusty ground, and that which is sheltered from wind in a damper, lower-lying locality. If a hasty storm had passed over the whole after sunset last evening, and then the clouds clearing off, a severe morning's frost equal in intensity to that of this morning had followed it, you could have expected no fruit or tender vegetables to be left alive." "Just so," was the reply. We walked about and around the gardens till half-past 4 p.m., and we heard the garden-engine working away the whole time against and over the wall-trees; and when we came to the last door to pass out, there was the engine with three men, two pumping and guiding the nozzle, and the other bringing water from an open garden-tank, cold as nature allowed it to be. The men did not spare the water as to quantity, or their main force in supplying it, for the border under them was covered with crumpled, curled, and distorted leaves, and the ground underneath was soddened with moisture. I noticed that the foot-stalks of the leaves and young shoots were a good deal spotted with brown canker-spots. The air was then getting cold and keen, so we jumped into our fly, and returned home to tea in a warm room with a good fire, very much delighted with our little change. The weather continued cold and ungenial, with cutting east and north-east winds, and severe morning frosts for the next fortnight.

On May 19, a nice sunny, but dry cold windy day, we again started at 3 p.m. for a little ride; but though taking another direction, we came home by way of the same garden, as my companion had some business matters to attend to in the locality. I saw my old friend the gardener, who at once said, "Look round, and go where you like." It was very cold and searching, and I was glad to walk about well wrapped up to keep myself warm. Here, however, was the engine still at work by the three men, with water fetched from the open tank, and the poor trees were sadly crippled and cut up, with scarcely a perfect healthy leaf or young shoot remaining. The foliage that was left was badly curled and contorted, bulged and blistered, and so were the young shoots, as well as being full of brown canker-spots and pimples, bursting with gum. "Well," I observed, "I perceive you have but little fruit or foliage left on your wall-trees at this time." "No," was the reply, "since you were here last, the weather, the cutting winds and severe frosty mornings have indeed been terribly against the prospect of a fruit crop. I question if there will be any fruit left this season. We have kept the trees almost daily washed, to drive off the vermin, &c., but you see how they have suffered." "I fear," I said, "you rather encourage the enemy, instead of eradicating it. I never did or would allow any wall-trees under my care to be washed down after 10 or 11 a.m. till the month of June, and then never with cold, but always with tepid water, choosing genial mornings, in order to afford an opportunity for the trees, walls, and the surrounding soil to get entirely dry before sunset; and my general success for such a number of years is some proof that my ideas in this respect were not far wrong." I was always grieved to see late afternoon and evening storms come on in April and May, and was immediately on the look-out to provide some means of averting their serious after-effects. My friend, too, seemed to dislike late evening storms followed by clear, cold nights and severe white frosty mornings, but still he did not seem to realise the fact that washing down his wall-trees late in the day had much to do with their bad appearance, for how were the vermin to be got rid of, &c.? I found my simple reasoning had produced no very favourable effect, but I made a memorandum of it, knowing full well that this was not the only place where such a practice was carried out; and resolving that before another season came round, I would, if spared, just state these simple facts as a hint to other gardeners now in practice, and in the hope of inducing some of them to give us their candid ideas on the subject.—JAMES BARNES, *Exmouth.*

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## DRYMONIA TURIALVÆ.

THIS is a very desirable addition to collections of foliage plants, and being easily grown, should be in every collection; but being a plant requiring liberal treatment and abundance of water when growing, it did not attract much attention when first introduced, for unless well grown, it has a soft, washy look. The plant seldom grows more than 15 in. or 18 in. in height, and when well grown, the large metallic leaves droop round the sides of the pot. The foliage is usually from 1 ft. to 15 in. in length, and about 9 in. in width; but the collector informed me he had seen it with much larger leaves, and that the plants varied much in character, some of them being much more silvery in the foliage than others.

The flowers are a dirty white, set on short stalks in the axils of the leaves, and although something like a small fringed Gloxinia, are not very showy, so that we have removed them; but the seed-pods, which are produced very freely in their native country, are said to be very ornamental.

This plant roots very freely from cuttings of young shoots which are formed round the base of good-sized plants, and as the full beauty of the plant is developed in one season, it is best to throw away the old plants at the end of the season, and grow on young ones.

The plant being a native of the hot and moist river-banks near the Equator, does best in a hot-house, with a little bottom-heat, and requires a large quantity of water during the growing season, and also to be shaded from the direct rays of the sun. The soil which will grow a good Gloxinia will suit this plant. I use about one-third loam, one-third peat, and a third rotten manure, with enough sharp sand to keep the soil open, and generally give the plant two or three shifts from the cutting-pot. A 7-in. pot, with frequent watering, and an occasional watering with manure-water, will grow this plant to its full size, but by giving it a shift into a 9-in. pot, it will be grown a better colour, with less trouble. In the autumn the plant is liable to decay at the surface of the pot, if kept too wet overhead, in a low temperature. Like most other foliage plants, it is subject to bug, but is easily cleaned.—James Taplin, *South Amboy*, *New Jersey*, *U.S.A.*

## DEVELOPMENT OF LILY-BULBS.

It is a fact familiar to growers of Lilies, though scarcely known to cultivators generally, that there are different types of bulb amongst the various species of *Lilium*, while the Lilies themselves differ in respect to bulb-development from some of their nearest allies. It may be useful to make this fact more widely known, and in order to do so, we avail ourselves of some remarks on the subject by Mr. J. G. Baker, in a memoir on the Tulipeæ, published not long since in the *Journal of the Linnean Society*. In this most useful memoir, which deals with the nomenclature of so many of our garden favourites, including *Lilium*, *Tulipa*, and *Fritillaria*, Mr. Baker observes :—

" All the plants of the tribe are able, in a state of nature or under cultivation, to hold their ground, and increase more or less, by means of bulb-reproduction, independent of being multiplied by means of seeds.

" The squamose perennial bulb, as exemplified in all the Old-World species of *Lilium*, consists, in its mature form, of a large number of thin flat lanceolate or oblong-lanceolate scales tightly pressed against one another face to back, and spirally arranged round a central axis which is not produced either vertically or horizontally. From the under-side of the central axis proceeds downwards a dense tuft of fleshy fibres, and from the upper-side is produced the flower-stem of the year, its lower part, between the summit of the bulb and the surface of the soil, giving off copious radicular fibres, which assist greatly in procuring the nourishment and strengthening the hold upon the ground of the developed flower-bearing stem. This underground root-bearing portion of the stem above the bulb is often vertical, but in some species, as, for instance, *Lilium Leichtlinii*, will creep for the length of half a foot, so that, if grown in a pot and the bulb planted in its centre, the stem will spring up from the side of the pot. All these numerous flattened scales of the bulb possess potentially the power of developing new bulbs in their axils, and will do this, in some species, at any rate, under cultivation, if a bulb be broken up and properly treated; so that what with bulb-reproduction and seed-reproduction, a skilful operator may in three or four years multiply fifty-fold his stock of a desirable species or variety. But in a state of nature there is only one new flower-bearing stem developed each season from the centre of the bulb, and a few from the axils of the decaying outer scales. A new bulb, whether grown from seed, or from bulblets developed in the axils of the above-ground leaves of the floriferous stem, or produced in the axil of one of the bulb-scales, takes not less than three years under the most favourable circumstances before it develops a flower-bearing stem. The first season we get an ovoid mass, perhaps a quarter of an inch in thickness, composed of half a dozen tightly imbricated scales, which sends out three or four slender radicular fibres from its base. At the end of the next summer we have a bulb as large as a Hazel-nut, with a copious development of strong radicular fibres from its under-side, and the half-dozen scales prolonged above the soil into a rosette of oblanceolate leaves. Next year, if circumstances be favourable, the flower-bearing stem is developed; and then, if nothing untoward happens, the bulb goes on living for an indefinite period, sending out each year a flower-stem from its centre, and shredding off old scales with buds in their axils, more copiously in some kinds, less copiously in others, from the circumference all round.

"In two of the Californian Lilies, *L. Washingtonianum* and *L. Humboldtii*, this type of structure is modified by the central axis of the bulb being prolonged horizontally, so that the scales are thrown out of a regular spiral, and the mature bulb is irregular in shape and more or less flattened laterally. Here, then, we get a squamose bulb taking the first step to pass off in the direction of a true rhizome; but the fleshy scales are quite similar to those of the typical form. The direction of the rhizome is vertically oblique, the new scales being formed at the deepest end.

"A second modification of this type of structure I cannot do better than describe in the words of Duchartre (*Observations sur le genre Lis*, p. 28):—'To give an idea of this development, allow me to report what I have seen in *Lilium canadense*, as examined at the commencement of the month of March, and in consequence at a time when only the first indications of the vegetation of the year were observable. At the base of the stem which had flowered the preceding year, and of which there remained only a small portion hidden in the ground, was found the bulb from which that stem had issued forth, a bulb formed of short scales, still fleshy and fresh for the most part, pointed and laxly imbricated, which, taken as a whole, was about twice as broad as deep. Immediately above this bulb was the remainder of the old stem, bearing a ring of root-fibres now dead and dried up. Finally, the extreme base of this same old stem was prolonged below the bulb with a diameter nearly double that which it had above it; and after half-an-inch or more it ended by a broad truncation. It is from this old stem which has flowered in the preceding year, immediately below the old bulb, and very likely from the axil of a scale that has fallen, that the horizontal branch is originated, which at its extremity bears the new bulb from which the conical summit of the shoot which will soon develop into the flower-stem of the year, is already seen to rise. This rhizome does not reach a length of more than an inch or an inch and a half. From its points of origin it descends a little into the soil, then raises itself to become horizontal, and finally rises at its extremity to form the axis of the new bulb, and to be finally continued as the new flower-stem. In its underground progress it bears small spiral scales, thick and fleshy, of which the first are slightly spaced, but those at the end of this subterranean branch growing closer and larger and forming thus the new bulb. From the anterior portion of this rhizome, especially from the part that bears the lower part of the young bulb, arise numerous thickish rootlets, on the healthy action of which the vitality of the new vegetation evidently depends. Later on in the year the old bulb disappears, the horizontal rhizome thus becoming free. Then the rhizome dies in the part which does not produce rootlets; and at the same time a new rhizome arises from the base of the bulb of the year, to form in its turn at its extremity another bulb to yield the flower-stem of the year following. There are produced, then, in these Lilies a succession of subterranean bulb-bearing branches, or a series of successive generations, each of which has an annual bulb for its fundamental basis.'

"In parting from this squamose type of structure, I wish to point out that there are three different kinds of 'rhizome' in different species, developed in connection with it, all of which are spoken of in books under the general term 'rhizome,' but which are not homologous, namely:—1st, the produced oblique central axis of the Californian Lilies; 2nd, the lower part of the horizontal branch, originating from a bud developed in the axis of a leaf-scale, which branch at its extremity bears a new bulb, as in *Lilium canadense;* 3rd, the lowest part of the flower-bearing stem above the bulb when it creeps below the surface of the soil, as in *L. Leichtlinii.*"

To these remarks of Mr. Baker's, we may add that *Lilium Wilsoni*, figured in our volume for 1868, p. 121, and referred by him and others to *L. Thunbergianum*, as a variety, has a mode of development unlike what is met with in that or in any other known cultivated species. This plant produces from the outer scales of the matured bulbs a kind of underground runner, which terminates in a flower-stem; but its chief peculiarity is that it bears, at intervals of two or three inches as it progresses, young equal-sized bulbs, which afford an excellent means for the rapid increase of the plant. The bulbs of the original plant propagated themselves in this way, and seedlings from it, which have reached the flowering stage, and which may consequently be safely identified, possess, in a full degree, this remarkable habit, which, as we learn from Mr. Wilson, is not found in any other species, the horizontal portion of the flowering-stem of *L. Leichtlinii* not being (at least normally) bulbiferous, and, moreover, proceeding from the crown of the mature bulb.

## AMARYLLIS FORMOSISSIMA, OR JACOBEA LILY.

THIS beautiful plant is an old inhabitant of our gardens, but is not so much grown as it deserves to be. Its deep red flowers, when fully expanded, have a very striking and beautiful appearance. The flower-stems are produced from the sides of the bulbs, so that after the flower produced on one side is decayed, another stalk arises from the other side of the bulb; but there is usually only one flower produced from the same stalk. They will flower two or three times in a year, and are not regular to any season; but from March to the beginning of September the flowers will be produced when the roots are in vigour. It will grow and flower pretty well in a greenhouse, but will not flower so often, nor send out so many offsets as when grown in a stove. It delights in a rich, sandy soil, with plenty of heat and moisture during the growing season. The great art in cultivating this and all other bulbs is to secure vigorous leaves, as on these depend the quantity of organised matter prepared and stored in the bulb, and consequently its ability to flower another season. When the plants are in a growing state, they should be well attended to in watering, but when the roots are not in a growing state, very little or no water should be given, but the pots should be placed on a shelf in the stove, where they may remain until February, when they should be started into growth. It is freely propagated by offsets, which may be taken off every year. They should be put into pots of middling size, and if they are kept in a moderate degree of heat and carefully watered, they will soon increase in size and produce plenty of flowers.—M. SAUL, *Stourton.*

## VINES AND VINE-CULTURE.—CHAPTER VI.

### PRUNING AND TRAINING (CONTINUED).

RESUMING the thread of the subject at the point where it was broken off, at p. 226, the condition of the pruned Vine in succeeding years may now be briefly noticed. Fig. 6 may be taken to represent properly pruned spurs of three years' formation; and fig. 7 similarly well-pruned spurs at the end of ten years. Either may, indeed, by careful and rigid pruning, be kept within much less compass; but the figures we have given may be taken to represent ordinarily well-formed spurs.

The stem of a well-grown Vine at ten years of age should be from 1 in. to 1½ in. or even 2 in. in diameter, more or less, according to the length of the rod; and a Vine of this age would have for some time attained its full limits as to length, so that the pruning to be practised would be simply a repetition of what has been explained.

One important point, however, in regard to the spur system of pruning is that of the distance apart or between the spurs. As a rule, they are retained too closely. This is chiefly owing to the situation of the buds, each bud being allowed to form a spur irrespective of its distance from the adjoining buds. It is desirable to sacrifice some of the buds, in order the better to develop the others.

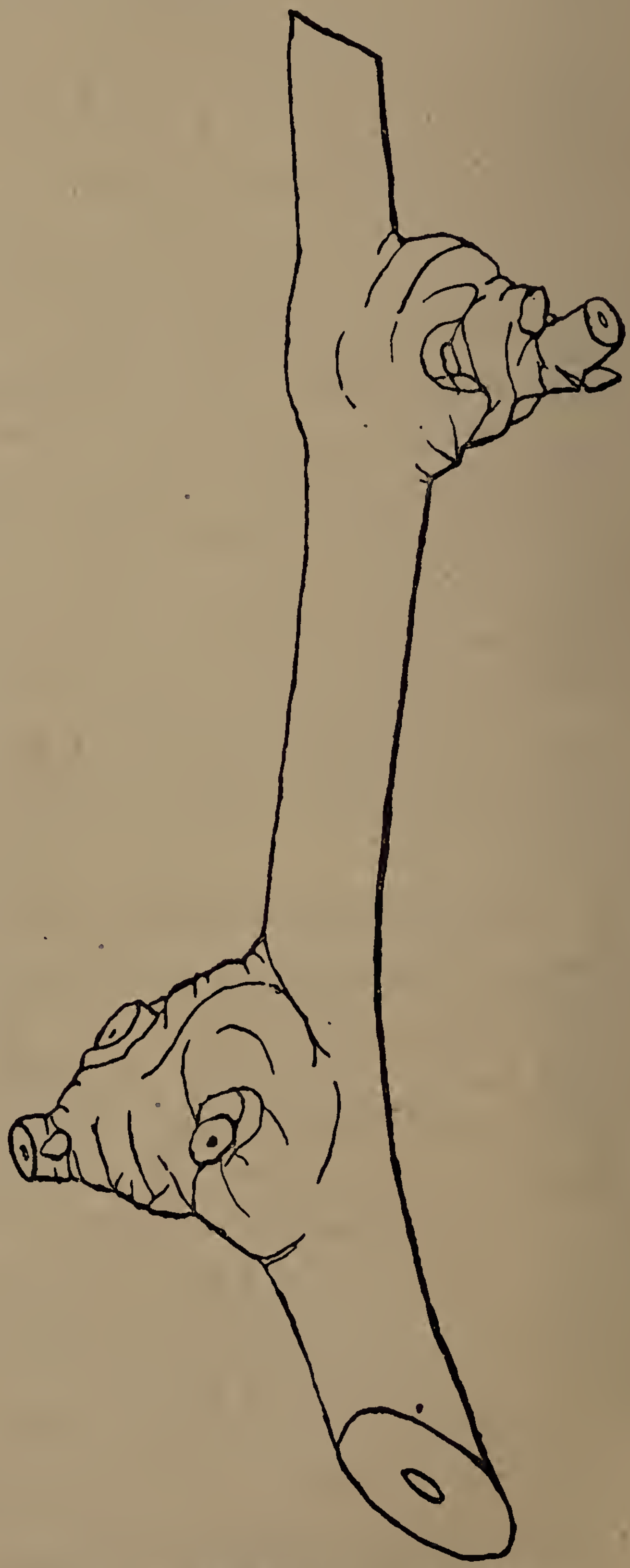


FIG. 6.—THREE-YEAR-OLD VINE STEM, spur-pruned (reduced).

The leaves of a Vine are large, so that the side-shoots should not be less than from 18 in. to 24 in. apart. This will allow of a greater and better leaf-development on each particular shoot that may be left. It is only by allowing space and full exposure that leaves can be properly developed; and assuredly, without good leaves, we can never get good Grapes.—A. F. Barron.

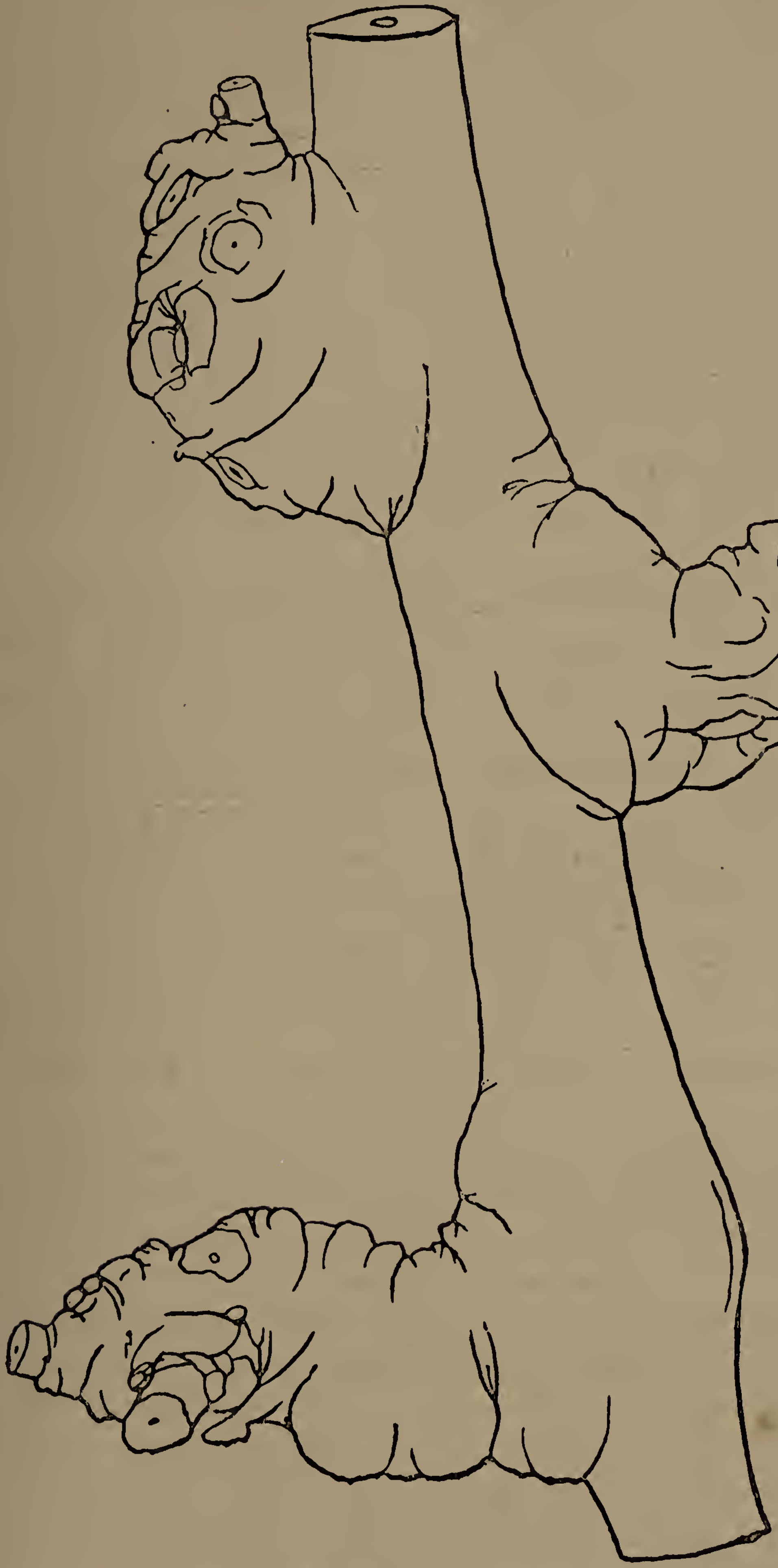


Fig. 7.—Ten-Year-old Vine Stem, spur-pruned (reduced).

## GRAPES: THEIR PECULIAR DEFECTS.

SOME time ago (p. 55) I sent you a short paper on this subject, in which I ventured to deprecate the too frequent practice of planting several varieties of Grapes in the same house, without any, or at least without due regard to their characteristic defects, and in many instances without a thought whether the like treatment would be equally suited to each kind. The result, as might reasonably be expected, is often partial, and too frequently complete failure; whereas, if only one kind, or only those kinds had been planted which are known to succeed under precisely the same treatment, the result would have been, in all probability, perfectly satisfactory. My experience has induced me to believe that the more closely these (to some persons minor) details are attended to at the commencement, so, in proportion, will be our success. Especially do these remarks apply to those varieties of Grapes which possess peculiar tendencies, such, for instance, as the *Madresfield Court Black Muscat, Mrs. Pince's Black Muscat*, and *Chasselas Musqué*.

Two years ago I visited one of the best fruit establishments in the kingdom, where, in a very large new vinery, hung some of the finest fruit of the *Madresfield Court* and the Black Hamburgh that I ever saw. They were not quite ripe, but were magnificent, both in bunch and berry. Three weeks after the time of my visit nearly every berry of the Madresfield Court was cracked and worthless, and the flavour quite insipid; but not so with the Hamburghs, which were perfect in every respect. If I had not previously seen and tasted the former variety in the most splendid condition, I should have been tempted to concur with the freely-expressed and decided opinion of my friend, the gardener, that it was a washy, deceptive, worthless grape. One thing was, however, quite evident, that the conditions which suited the Hamburghs admirably, were not at all suited to the Madresfield Court. But those persons who have grown the latter variety in a cool vinery, where the roots are thoroughly under subjection, and can be kept moderately dry just previous to the commencement of, and during the process of, colouring, and where a brisk, dry atmosphere can be maintained through the period of ripening, believe it to be one of the most superb grapes in cultivation. The characteristic defect or peculiarity of this magnificent grape therefore appears to be to absorb too much moisture during the ripening process, consequently, if a close, moist atmosphere is maintained the berries are particularly liable to crack. If, in addition to this, the roots are in a wet border, the evil is increased, and the flavour is perfectly insipid. The only grape which I have proved will succeed under the same method of treatment as this is the Golden Champion, when it not only loses its defective speck in the berry, but shows and sets its fruit as freely as the Hamburgh; it also finishes with exquisite colour and and flavour.

The peculiar defects of *Mrs. Pince's Black Muscat* appear to be, that of not setting freely or swelling its berries regularly, and also of not colouring perfectly, and yet when grown under certain conditions these imperfections totally disappear. Some persons say it requires a high temperature, and should be grown with the Muscat of Alexandria. To test the truth of this assertion, I planted part of a house with it at the time it was sent out, and the other part with Muscat of Alexandria. At the same time, I also planted one vine in a cool house with Hamburghs. The annual results have been as follows:—In the hotter house, where I may observe the Muscat of Alexandria has been excellent in every respect, and has ripened in July, the Mrs. Pince has failed to set, swell, or colour well, although the flavour of those berries which were perfect was good. In the cool house the berries have not only set well, but have swelled and coloured to perfection, and the crop has been double that in the warmer house. The flavour, however, was not at first equal to those in the Muscat house. Believing this to be for want of more powerful sun-heat at the time of ripening, I determined to start the house somewhat earlier, so as not to delay the ripening period so late into the autumn, since which I have found the flavour quite equal, if not superior, to those in the hotter house. These Grapes have, for the last two years, hung on the vines till May, at which date it has proved with me the empress of all Grapes.

My experience with this excellent Grape, therefore, induces me to believe that its peculiar defects may be counteracted by a course of treatment which must be quite in accordance with the wishes of every cultivator, because it is the reverse of expensive,—viz., cool treatment throughout; at the same time, the Vines should be started not later than the beginning of March, so that they may have a long period of growth and powerful solar heat when ripening. The *Black Alicante* also succeeds under precisely the same treatment, and may with safety be planted in the same house.—T. C. W.

## NOTABLE NEW PLANTS, FRUITS, Etc.

[F.C.C. = First-class Certificate.]

ANTHERICUM Williamsii [F.C.C.].—A handsomely variegated cool greenhouse plant, from the Cape of Good Hope, the broad grass-like green foliage distinctly margined and striped with yellowish-white.—*Mr. B. S. Williams: R.H.S., Nov.* 11.

Chrysanthemum (Japanese) Duchess of Edinburgh [F.C.C.].—A variety with white ray florets, and a pale rose-coloured quilled disc, being the first of the anemone-flowered type seen in this section; a showy variety for conservatory decoration.—*Messrs. J. Veitch & Sons: R.H.S., Nov.* 11.

Chrysanthemum (Japanese) Gold Thread [F.C.C.].—Having stout thread-like florets of a bright orange-brown colour.—*Messrs. J. Veitch & Sons: R.H.S., Nov.* 11.

Chrysanthemum (Japanese) The Cossack [F.C.C.].—This variety has large flowers, very full of broad ribbon-like florets, of a red-and-gold colour; very showy.—*Messrs. J. Veitch & Sons: R.H.S., Nov.* 11.

Vitis heterophylla humulifolia [F.C.C.].—A charming variety of the various-leaved Vine, having hop-like foliage, and bearing clusters of pretty deep blue berries; a fine hardy decorative climber for autumn.—*Mr. J. Woodbridge: R.H.S., Oct.* 7.

**Grape Mrs. Pearson** [f.c.c.].—A seedling white grape of the Frontignan type, the bunch of fair size and compact, with roundish-oval berries of a pale yellow colour, and fine flavour. Promises to make a useful late white Grape.—*Mr. J. R. Pearson: R.H.S., Nov.* 11.

**Grape Venn's Seedling Black Muscat** [f.c.c.]—An early-ripening variety of the Muscat section, with handsome oval berries of a good colour, and a very agreeable flavour, produced on large well-shouldered bunches.—*Mr. Sweeting: R.H.S., Aug.* 19.

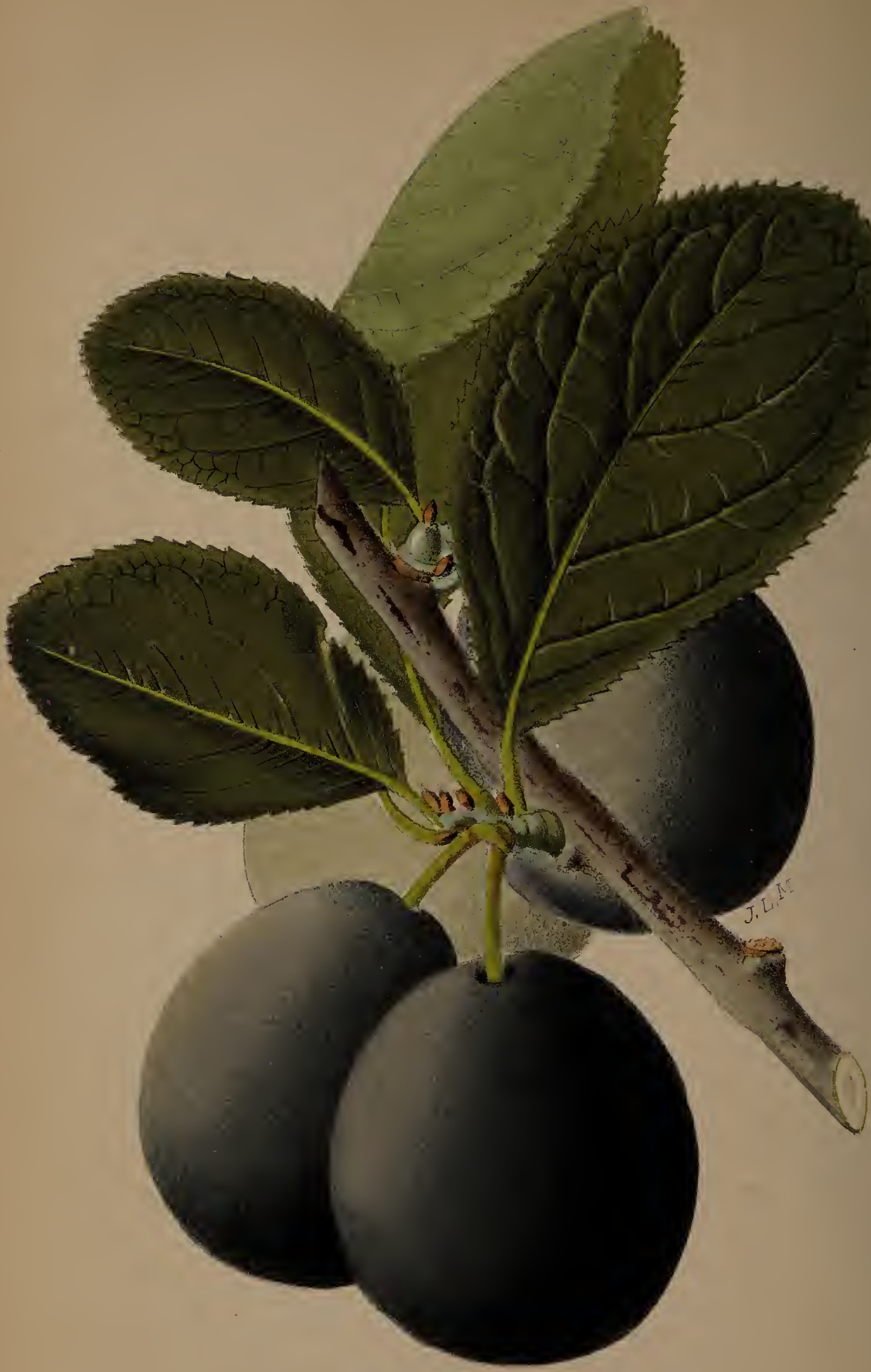
**Pear Lucy Grieve** [f.c.c.].—A fine handsome variety, ripening in October, of juicy and delicious flavour. It is of ovate outline, of a fine yellow colour, and with a tender, melting flesh.—*Mr. P. Grieve: R.H.S., Nov.* 11.

**Pear Pitmaston Duchess d'Angoulême** [f.c.c.].—A richly flavoured and fine variety; delicious and melting; and beginning to find its way into the most select collections.—*Rev. Geo. Kemp: R.H.S., Nov.* 11.

## FRUIT-CULTURE *versus* CREMATION.

BEFORE Cremation has taken firm footing with the masses, let me beg a corner of the Florist and Pomologist to enable me to set down one or two facts which bear at least indirectly, if not directly, on the subject of this new style of sepulture. I had occasion, only the other day, to visit a gentleman at his business office, and on a baize-covered table there lay two very fine samples of Pears. Some thirty or forty of the larger sample were the finest of that variety I had ever seen. I naturally asked if they had not been grown on a wall, and learned that they had. Again, I questioned if this feat had been accomplished in Lancashire, and was told it had been. We both agreed that great credit was due to the grower, whoever he might be, for such splendid productions. I tasted one fruit, and found it melting and luscious. On further inquiry, I found that the gentleman was an amateur fruit-grower, and sold what he did not need for his own use, or for the use of his friends; and that he had sold the stock of which these were the sample at 6s. per peck of 16 lb.—say, 4½d. per lb.—to a fruiterer to sell again. This item tells the quality of the fruit, that would thus cost 6d. per lb. to the retail buyer. The other sample consisted of Pears of small size, but they made amends for that by their numbers and their quality; indeed, large Pears and Apples, unless their characters stand high, are looked upon with some suspicion as dessert fruits.

But some one will think, if he does not say, What have these Pears to do with Cremation? I answer, Nothing! Certainly nothing whatever! But when I tell the reader that these clusters of small Pears and those delicious large Pears were grown upon a wall dividing the garden of this amateur from the churchyard—I had rather not name the parish, but it is not a hundred miles from Manchester—and that the foundation of the wall is favourable to the extension of the roots to both sides, he will see the bearing these fruits have on the subject.



PRINCE ENGLEBERT PLUM

J. L. Macfarlane del.

I have elsewhere shown farmers, butchers, knackers, &c., the value of flesh and blood as a manure for Apples and Pears; and a great amateur Rose-grower speaks of the Dundee Rambler as running wild about the church, and eke the churchyard. Therefore I conclude that where fuel is scarce and fruit is dear, it will be better to hold on to the cold-earth system of sepulture, out of which some good may arise and much beauty. If some of the Climbing Roses once got possession of an old churchyard, they would hold their own against aught but fire and faggot, and form a handsome screen, "hiding the ruin that they feed upon;" but what could be expected from the handful of animal charcoal of the burnt bones, and the ashes of the vegetable charcoal of the coffin? Whatever gain, then, Cremation may be to other parties, those that live by the earth, from the grave-digger upwards, must grieve to see Mother Earth robbed of her rights, and some simple Christians might boggle at the idea of rising again, if so be that they were never to be buried.—A. Forsyth, *Salford.*

## PRINCE ENGLEBERT PLUM.

WITH AN ILLUSTRATION.

WE offer an illustration of this variety, not as a novelty, for it is now extensively grown around London for market purposes, but as one of the best sorts where annual and remunerative crops are a consideration. Its bearing qualities are something remarkable, and its quality by no means to be despised, even for dessert, while in the culinary department it has very few superiors. Dr. Hogg describes it as having "Fruit very large, oval, and marked with a shallow suture. Skin of a uniform deep purple, covered with minute russet dots, the whole thickly covered with a pale gray bloom. Stalk half an inch long, inserted in a rather deep cavity. Flesh yellow, rather firm, sweet, juicy, with a brisk and rich flavour, and adhering to the stone. Shoots smooth." To this he adds the remark, which we can fully endorse, that it is "an excellent plum, either for the dessert or for culinary purposes, and delicious when preserved. Ripe in September. The tree is a great bearer, and in this respect is one of the most valuable for large culture." Our specimens were obtained from Mr. Dancer, of Chiswick.—T. Moore.

## PINK LORD LYONS.

THIS very fine Pink, valuable alike for forcing or border purposes, was raised a few years ago from seed by Mr. James Clarke, of Bury St. Edmund's, and it is altogether so fine and distinct, as to be most deserving of cultivation. The flowers are large in size, of full substance, of a deep rosy-purple hue, with indistinct maroon blotches, and the petals slightly fringed. The peculiar glow of the colour, and the individual beauty of the flowers, places it in the very front rank of border Pinks.

I was somewhat astonished a short time since, to hear one of our leading florists say that Pink Lord Lyons was a bad doer. With me, the character is altogether the opposite of that, and I have the variety true, because the plants came to me direct from Mr. J. Clarke. My soil is a dark loam, on the gravel, inclined to get close and sticky in wet weather, and to bake a little in dry weather, but the Pink grows with great vigour, branching freely, and flowering porfusely. The last-named quality is one of its chief charms, and established tufts of it throw a great number of flowers.

Everyone who sees it begs a plant, and I find it easy to propagate in two ways—by cuttings put in in July, when it has done flowering, and by division of the roots in autumn. When it is in flower, I draw some fine soil up round the stem, and this induces the side-shoots to send forth roots, and so fine young plants are formed by the autumn. In July, I put some pipings into an ordinary cutting-bed, and there they strike freely, without the necessity for putting hand-lights over them. Mr. Clarke did good service to floriculture when he raised and sent out this superb Pink.—R. DEAN, *Ealing.*

## THE ROOT-PRUNING OF FRUIT-TREES.

MISAPPREHENSION in regard to operating on the roots of fruit-trees, when in an unfruitful condition, is notoriously prevalent. The general cause of barrenness is that too much sap is drawn up by the roots into the branches, preventing the fruit-buds, if any are formed at all, from going to rest at the proper time, so that they do not get matured and otherwise prepared to produce a crop of fruit.

This is what generally leads to cutting the roots. Some of the other causes of failure are found in the want of root-action, or in the absence of sufficient warmth. We sometimes read that a trench should be taken out all round the roots, and every one cut clean off within a few feet of the trunk of the tree, the trench being then filled up with loam and manure well mixed. Such a practice is inconsistent with common-sense. Though the cutting may in some cases give a check to the trees, sufficient to cover long watery growths with short fruit-bearing spurs, the constitution of the whole tree is materially affected, even if it does not become bark-bound or acquire the germs of canker. Whenever the roots recover themselves after the severe shock of being thus rudely cut, they ramify freely into the rich mixture, and away they go right through it, again drawing more sap into the trees than can be turned to fruitful account. Though practical men are in general acquainted with these facts, somehow or other the knowledge does not extend far among the inexperienced, as the mutilating practice has many supporters.

When a tree is making undesirable growth, the first thing to ascertain is, if there are any tap-roots, and to see if these are growing away down into subsoil far from the influence of sun and air. If so, and if the tree is a young one, it may be taken up carefully and replanted in fresh loam, or at least in soil in which no tree-roots have previously grown. Any roots which have run far out of bounds, and are free from fibres, may be shortened ; a quantity of stones or lime-rubbish may be rammed firmly under the ball, with a few inches of soil next the roots, and six inches of the soil placed over them. A mulching over the whole is a good preventive against frost or drought. Older trees are better managed by examining the roots on one side of the tree before the leaves drop, but cutting should be avoided as far as possible, seeing that it may be termed a necessary evil. A quantity of hard material mixed with the soil will cause a lot of fibres to grow, instead of "tap" roots. A firm soil beyond the feeders is of vital importance; it increases the number of fibres and acts as a preventive to the formation of long, bare, thong-like roots, which are always scarce when trees are healthy, and in a full fruit-bearing condition.

When there is a want of vigour shown by an absence of growth, and by the fruit-buds crumbling off or decaying, a good dressing of rich material put over the surface of the roots, after the old soil has been removed, will do much to give new life. It often happens that the best roots of old trees are growing into unhealthy subsoil, and to save the trees the only remedy is to reach these roots and relieve them, and replace the sour soil by healthy material.

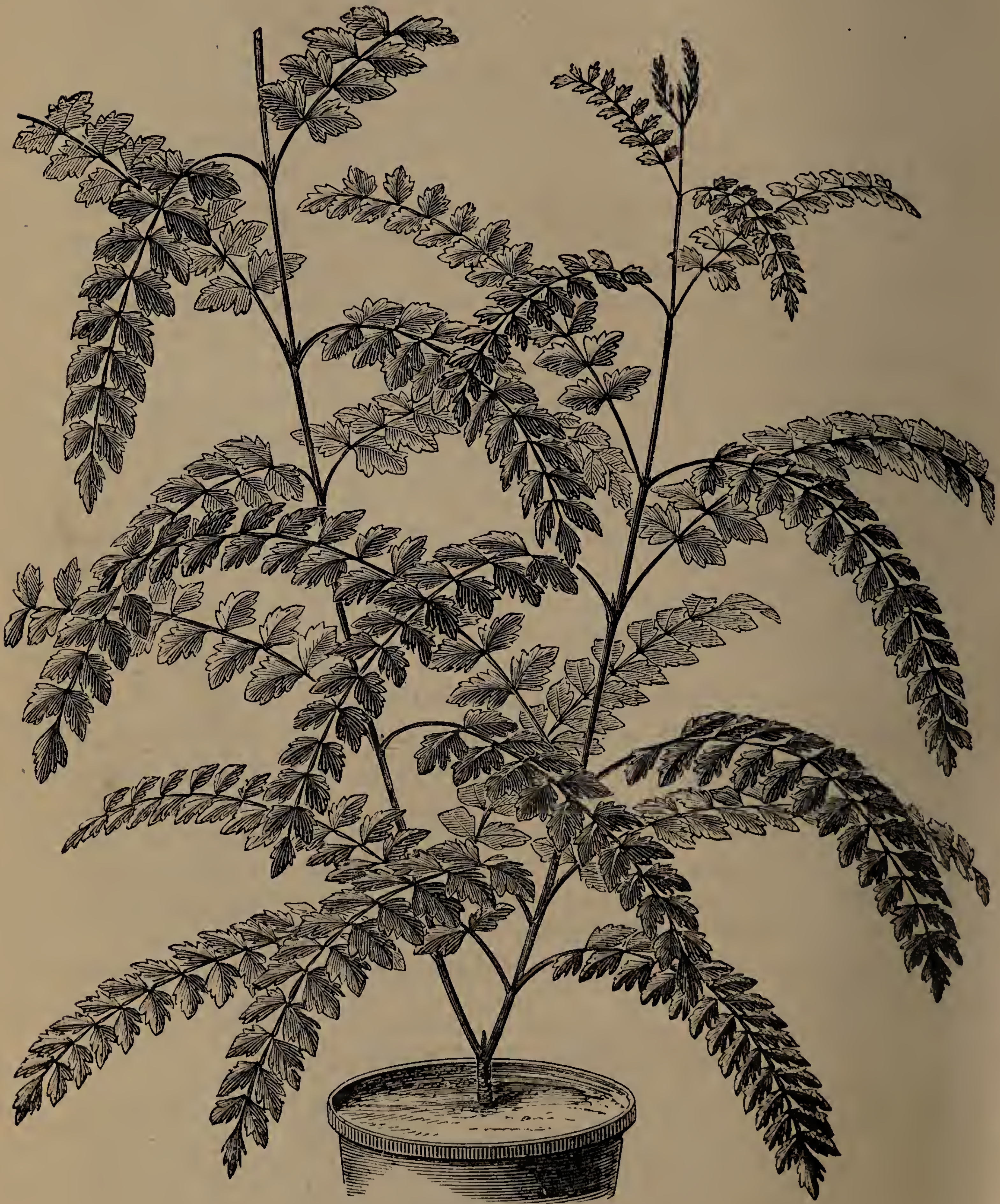
If cutting the roots cannot be avoided, let the knife be used, and make the cuts clean. When the locality is cold, the roots may be lifted well above the surrounding soil; and if means are adopted to prevent them from growing down into the cold subsoil, success will be all the more likely to follow. I have seen Pears which produced small insipid fruit, and which always cracked, lifted up and kept high and comparatively dry, grow excellent produce, both as regards size and quality. The effect on Figs and Pears when kept high at the roots, so that the sun can do its work, is often astounding.—M. T.

## COTONEASTER SIMONSII.

THIS is an exceedingly ornamental shrub, and is well adapted for game coverts and underwood planting. When grown singly, as a specimen, it is very beautiful at this season, and for several weeks to come, until the birds strip the bushes of their bright orange-red berries, of which they are fond. When grown as a specimen, it should be kept well cut back to form a handsome bush, otherwise they will grow loose and straggling. It will grow in any common soil, and is not particular as to situation, provided it is not wet. It may be increased by layers, but as it seeds freely, it is more readily increased in quantity in that way.—M. Saul, *Stourton.*

## CAMPSIDIUM FILICIFOLIUM.

THIS is a provisional name for a very elegant, slender-habited climber, the flowers of which are as yet unknown. It is, however, referred to *Campsidium*, from the resemblance borne by its foliage to that of known species of the genus. The present plant, of which a woodcut from Mr. Bull's catalogue is annexed, has been raised from seeds received from the Feejee Islands. It has a slight, woody stem, furnished with opposite imparipinnate leaves, which, including a petiole of about an inch, measure five inches long, and consist of from nine to twelve pairs of small ovate leaflets, which are deeply cut into two or three lobes on each side, the larger lobes being sometimes also toothed. These leaves, from their small size, narrow linear outline, and the size and arrangement of the leaflets, bear very considerable resemblance to the fronds of some of the small, slender, pinnate ferns, whence the name which has been given to it.



Campsidium filicifolium.

Whether planted out as a stove climber in situations appropriate to subjects of this slender habit, or grown in pots and trained over a suitable trellis, it has a most elegant and pleasing character. The merit of the plant, as one of the ornamental-foliaged class, has been well attested by the award of a First-class Certificate both from the Royal Horticultural and the Royal Botanic Societies. It has been introduced by Mr. Bull, and was sent out by him in the early part of the present year.—T. M.

## FRUIT NOTES.

OUR experience here enables me to endorse all that Mr. Earley says (p. 218) in favour of PRINCE OF WALES NECTARINE. We have had a fine crop of it in an unheated house, large in size, with a rich refreshing flavour. We never saw either wasps or flies near the fruit. Being a strong grower, we find that if too liberally supplied with manure in the soil in winter, the fruit is apt to crack in the following season.

We have recently gathered from a small plant of the NEGRO LARGO FIG several good fruits, large for the size of the pot in which the plant is growing. The flavour is all that can be desired in a Fig. When better known, this variety will be largely grown.—A. HENDERSON, *Thoresby.*

## CYDONIA MAULEI.

THIS new kind of fruit, introduced by Messrs. Maule and Son, from Japan, and named *Pyrus* (*Cydonia*) *Maulei*, on the authority of the *Gardeners' Chronicle*, is likely to prove a very useful acquisition to the realms both of Flora and Pomona. The flowers, though not so large as those of the older species, introduced about the year of Waterloo (1815), and known to us uniformly, years ago, as *Cydonia japonica*, are nevertheless very pleasing and showy, being of a striking light orange-red colour. The fruits, which are borne abundantly in clusters, are less in size than those of *C. japonica*, irregular in form, deeply corrugated, possessing deep " eyes," and of a bright waxy colour when ripe. The flavour of the fruits is singularly raw and astringent, and such as to give birth to a notion of their worthlessness, but a conserve or marmalade made from them has an original flavour, and it is not at all improbable that it may be turned to account in this manner, and that used as an addition to apple-jelly, it may be found extremely useful.

We possess here, then, at once an ornamental deciduous shrub, of the very first order—ornamental, that is, in regard to its peculiar, lucid green foliage, its scarlet blossoms, and its autumnal clusters of yellow fruits. Few, if any, plants are better adapted for planting alongside wilderness-walks, or to grow amongst or in association with rock-work or artificial ruins. The blooms borne amidst such foliage, and on the characteristic wiry wood, with its striking thorny appurtenances, would serve to light up any scene of which they formed part; while possessing the aspect of a bastard apple or pear, a running-back from the original pome, like a forbidden fruit, it would seem to be a remnant of Paradise. But seriously, for elevated sites, to hang and grow amongst prominent boulders or projections of rock-work, having such characteristics as I describe, no better subject exists.

There is something very unsatisfactory about the name of this plant, and the *Gardeners' Chronicle*, to which we look as an authority, has but thickened this modern mist. Why put it, "*Pyrus Cydonia Maulei*"? The plant has either a legitimate right to the name Cydonia, or it has not. Cannot the subject be further discussed and settled once for all?—WILLIAM EARLEY, *Valentines.*

⁂ Our correspondent does not quite realise the facts. Our best botanists now put all these plants in the genus *Pyrus.* Of this, *Cydonia* is scarcely regarded as a section by some, but is admitted to this rank by others. Hence the formula Pyrus (Cydonia) Maulei, which means genus Pyrus, section Cydonia, species Maulei. As the sectional name indicates the more exact affinity of the plant, doubtless the garden name will, for brevity's sake, be found to lapse into *Cydonia Maulei.* We shall publish a plate of this fine novelty shortly, illustrating both flowers and fruit.—ED.

## GARDEN GOSSIP.

THE *Pelargonium Society*, which has just been established for promoting the culture of this flower, and in the hope of bringing forward some novelties by means of hybridisation, has announced the following prizes to be competed for at the Zonal Pelargonium Show of the Royal Horticultural Society, to be held at South Kensington on Wednesday, July 21st, 1875; while its First Annual Meeting is to be held on the day following, at Chiswick. Some 40 members have joined. The competition will take place at South Kensington, by permission of the Royal Horticultural Society. The following are the Prizes:—

CLASS I.—12 Distinct Varieties of ZONAL PELARGONIUMS, "Florists' Class," in pots of 8 in. in diameter. (Open.) £8, £5. (For varieties with finely-shaped flowers, after the florists' model.)
CLASS II.—12 Distinct Varieties of ZONAL PELARGONIUMS, "Decorative Class," in pots of 8-in. in diameter. (Open.) £8, £5. (For the profuse-flowering showy varieties, known as Hybrid Nosegays.)
CLASS III.—30 Distinct Varieties of ZONAL PELARGONIUMS, "irrespective of Class," in pots not exceeding 6 in. in diameter. (Open.) £6, £4.
CLASS IV.—6 ORNAMENTAL CAPE PELARGONIUMS, dissimilar. (Open.) £3, £2.
CLASS V.—Best HYBRID PELARGONIUM, of distinct character. (Open.) £2, £1.
CLASS VI.—24 PELARGONIUMS, cut blooms, single trusses, dissimilar. (Open.) £2, £1.
CLASS VII.—12 PELARGONIUMS, cut blooms, single trusses, dissimilar. (Amateurs.) £2, £1.

The Judges may also in their discretion, and subject to the approval of the Committee, award a prize to any exhibit worthy of particular notice, which may not be provided for in the Schedule. It is an imperative condition that every Variety exhibited shall have conspicuously appended to it its own Name, together with that of the Raiser, such names to be either printed or distinctly written on a card; and the "Chiswick standard" is to be adopted in regulating the sizes of the pots.

—— THE specimens of *Uvedale's St. Germain Pears* which were exhibited at South Kensington on the 11th ult., by the Rev. T. C. Bréhaut, constitute something like an epoch in Pear-culture. They were all grown on one single tree, and that tree, a single cordon, occupying a wall-space of under 40 square feet, produced in 1872 six first-prize Pears. "The six 1874 Pears," writes Mr. Bréhaut to the *Gardeners' Chronicle*, "together weighed an ounce or so under 20 lb. when gathered from the tree; but being very wet, some one or other induced me to dry them up in a warm greenhouse, by which absurd proceeding they lost 2 oz. very rapidly. It is worthy of remark that it was the largest Pear of all, which weighed all but 5 lb. when fresh gathered, which diminished the most, so that now it weighs 2 oz. less than 5 lb. As it is nearly 20 in. round (one measurement gave 20 in. and another 19½ in.), I submit to the judges of English fruit whether they have ever seen such a Pear or not? I intend writing to ask some who know in France and Belgium, but I myself think it unapproachable as to size. Of course, the Pear required much care to grow to this size. One matter I may mention here; they always 'slept in blankets'—*i.e.*, were kept together a little at times. They were also fed on good matter, but every skill would have been useless but for the style of training. Also I must here say there are Uvedale St. Germain and Belle Angevine, and also Belle de Jersey. You must get the true sorts."

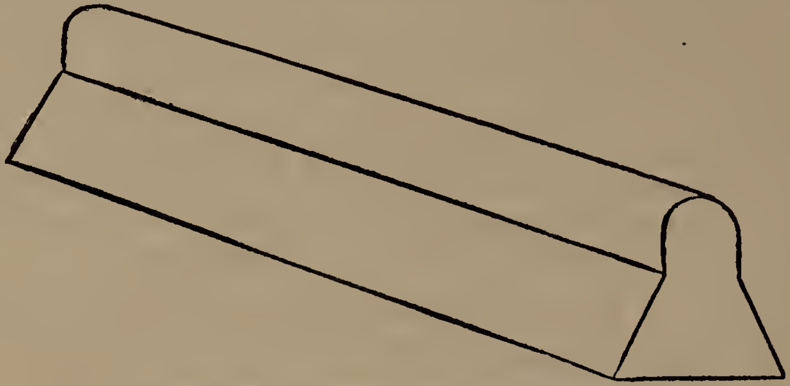
—— THE following letter, communicated to the *Gardeners' Chronicle*, respecting the famous *Lambton Castle Grapes*, about which there have been some unwarranted statements made, clears up the matter. Mr. Smith, gardener at the Vice-Regal Lodge, writes:—"The large bunches of Grapes that were exhibited at the Belfast Show on August 20 were presented by the Earl of Durham to His Grace the Duke of Abercorn, and brought here immediately after the show. His Grace being desirous to show them to the company at dinner, I had arches of round iron fixed to the ends of oblong silver baskets, and covered with Vine leaves and spray. The bunches were suspended from these, high enough to clear the surface of the basket. In doing this, I had ample opportunity of examining the bunch that has been the subject of discussion, and had there been any attempt at amalgamation, I should certainly have seen it. From the eye from which the bunch started to the point where ramification commenced, there was about 4 in. of true stem, perfectly round, and no sign of flattening throughout the remainder of the bunch. The immense size of the bunch gave the berries a small appearance, but on comparing them individually with others of moderate dimensions, there was little difference; and though they were not well coloured, many of the berries had the hammered surface. The eating qualities of the Grapes were very good, the pulp being remarkably firm and sweet. There need be no doubt whatever entertained regarding the bunch in question being one genuine bunch."

—— SAMPLES of *Veitch's Self-protecting Cauliflower* which we have seen prove it to be both late and protecting. It is being brought forward as a really valuable variety for use in November and the beginning of December, and so thoroughly protected by the foliage as likely to resist several degrees of frost. In the trial the Protecting was sown April 8; Veitch's Autumn Giant, April 18; Walcheren, April 29, with the result that the two latter were off, while the Protecting was only just coming in. The heads we have seen were not large, about 13 in. in circumference, very close and white, with a dense mass of incurving foliage, but the plants seem to have been fully long on the ground.

—— M. OTTO FROEBEL, of Zurich, gives the following as the authicent history of the origin of the *Anemone Honorine Jobert*:—"The plant is not a garden hybrid between A. vitifolia and A. japonica, but originated at Verdun-sur-Meuse about sixteen years ago, in the garden of M. Jobert, banker. From there the plant came into our hands in 1860, through my grand-uncle, M. Gustav Memminger, of Verdun, a great amateur of plants, after whom the Æsculus Memmingeri is named. M. Jobert obtained the Anemone Honorine Jobert from a large tuft of the old A. japonica, with red flowers, from which plant a root-branch flowered with pure white flowers. M. Jobert successively cut down all the red-flowering branches, and so raised the white variety. Our Nursery was the first to introduce the plant in commerce, under the original name given by M. Jobert, A. japonica Honorine Jobert. I have often seen at M. Jobert's the original plant from which the white variety was fixed, and therefore I guarantee the exactness of my assertion.

—— THE trials instituted by the Royal Agricultural Society respecting the *Potato Disease* have resulted, as was to be expected, in showing that not one of the so-called disease-proof sorts has, in reality, resisted the disease. During the period of vigorous growth, in all the varieties, in five out of the twenty localities the disease was virulent, and by the end of the season it was found that in almost all these places more or less disease was apparent; so that the question of disease-proof potatoes, as far as these trials are concerned, has been practically decided in the first year. Some most important communications have, however, been received from Professor De Bary, who has ascertained, by recent experiments, that the potato disease is not propagated by infected tubers; and that although the mycelium of the fungus (Peronospora infestans) was distinctly apparent in the stalks of plants raised directly from diseased tubers, no gonidia, or germs, were evolved. In a later communication, Professor De Bary expresses sanguine hopes that he has at last discovered the certain nidi, or resting-places, of the oospores, or active primary germs of the fungus, which, as he says, would essentially complete its life-history. The great practical results of these discoveries, if perfected, will obviously be that measures may be taken to destroy *in situ* the oospores of the fungus.

—— *Stevens' Garden Edging Brick*, which we recently saw in use in the kitchen garden at Trentham, is by far the best and neatest of any we have met with. It is represented in the accompanying figure. Mr. Stevens is doing away with live edgings, such as Box and Ivy, which have been formerly used, and after two years' experience is preparing to replace them by this brick, a light stone-coloured brick of his own design, remarkable for its neatness and durability. Its form admits of its being laid so firmly as to be practically immovable; its colour gives it the appearance of stone edging; and its outline is so simple and neat as to be thoroughly unobtrusive, though perfectly efficient. With an edging of this sort the walks can be kept clean with the least possible trouble by adopting the system of dressing them with salt, which is always a risky experiment when live edgings are made use of. This edging brick is 18 in. long, 5 in. high, and 5 in. wide at the sole, 2¼ in. being set above ground. Its great merit is the combination of elegance with durability and efficiency which it presents. This durability of course is due to the particular material of which it is made. The annexed woodcut is from the *Gardeners' Chronicle.*



STEVENS' GARDEN-EDGING BRICK.

—— A LARGE amount of information respecting the *Phylloxera* is being got together in France. Amongst other matters, M. Lichtenstein sums up the life-history of the insect, so far as at present known, thus:—(1) Colonising females begin to appear probably in August and September; (2) small uniform hybernating progeny; (3) oval pyriform testudiniform types, reproducing by parthenogenesis all the summer; (4) pupæ of two forms, oval and narrow at the waist, specially found on the nodosities of the rootlets in June and July; (5) swarming takes place in August, the insects emerging from the earth in myriads, exactly as in a formicary, when the winged insects escape; (6) laying of eggs on the leaves of Quercus coccifera end of August; (7) birth of sexual apterous individuals, copulation and production of colonising females. M. Maurice Girard has made some laboratory experiments concerning the action of toxic gases on the insects. The sulphocarbonates suggested by M. Dumas for their destruction are said to give certain results. Experiments made first on the plants and then on the insects themselves showed that plants did not in any way suffer from being syringed with weak solutions of these salts, while the insects which were placed near the substances impregnated with the solution invariably perished. M. Girard made experiments at Cognac with sulphocarbonate of potassium, prepared by the old costly method, and found that when some of this salt was placed at the bottom of a jar, and the insects introduced into the air in the upper part of the vessel, they soon died. As an insect-powder he considers this salt as at least as effective as cyanide of potassium. The next step was to procure it by a less costly method, and M. Dumas found that without the use of alcohol, hitherto believed to be necessary, the sulphide of potassium dissolved in water and the sulphide of carbon would mix when certain pains were taken. A wholesale manufacture of the salt was undertaken on this principle by M. Dorvault, and the necessary cheap materials procured for further experiments, which were carried forward by M. Monillifert, who found that Vines in pots bore for a long time the effect of the solution without any injury, while the Phylloxera, if present, were all dead in a few days; and that in the open ground, from 30 to 40 grammes (1 oz.—1½ oz.) of dry sulphocarbonate of potassium, dissolved in water, and poured into holes around the stem of the Vine, destroyed the insects without in the least degree injuring the Vines. M. Balbiani believes that the species seen by M. Lichtenstein on Quercus coccifera is not identical with Phylloxera vastatrix, and proposes to name it P. Lichtensteinii.

—— A VALUABLE series of experiments as to *the Movement of Water in Plants* has been carried out by Dr. McNab, whose general results we quote. As to the rapidity of ascent of water in the stem, Sachs observed a rate of 9 in. in the hour in the case of the White Poplar, and Dr. McNab, formerly one of 24 in. per hour, and now of 39 in. and 40 in. per hour. Dr. McNab's conclusions are:—(1) That under favourable circumstances, a rate of ascent of 40 in. per hour can be obtained. (2) That, contrary to the generally received opinion, direct experiment has shown that the upward rapid current of water does not cease in the evening. (3) That checking the transpiration for a short time, by placing the branch in darkness, does not materially retard the rapid current of water. (4) That the removal of the cortical tissues does not impede the rapid current in the stem, which moves only through the wood portion of the fibro-vascular bundles. (5) That a well-marked rapid flow of fluid will take place in a stem after the removal of the leaves. (6) That fluid will rapidly flow downwards as well as upwards in the wood portion of the fibro-vascular bundles, as seen in a branch in which lithium solution was applied at the top. (7) That pressure of mercury does not exert any very marked influence on the rapidity of the flow, in the one experiment made with a pressure of 110·53 grammes of mercury.

—— THE *régime* adopted at Trentham for *Growing Cool Orchids*, such as Odontoglots, is to give them water most profusely—the cold rain-water which falls from the roof being used summer and winter; and to allow fresh air to circulate freely amongst them at all times, night and day, except in very severe weather. The natural water at Trentham, as does any other water containing lime, kills the Sphagnum used for potting these plants, and this is most inimical to the plants; which never thrive so well as when the Sphagnum keeps fresh and in a growing state. In respect to the Sphagnum used for Orchid-growing, it does not appear to be generally known that amongst the different species the best for potting Odontoglots and similar plants is a dense-growing compact kind, whose very compactness gives it a sponge-like consistency, and enables it to suck up and retain water freely. This is what the Odontoglots like. This same kind of Moss, however, when used for blocking Phalænopsis is fatal to them, apparently from its holding too much water; and therefore for these the coarser, looser kind, which can only be packed more openly about the roots, should be used.

# GARDEN WORK FOR DECEMBER.

## FLOWERS.

DREARY, dark December is not the time to expect much gaiety in the Flower-garden. It becomes us, therefore, to make up as far as possible for the loss, by extreme neatness and order, and by having the beds filled with glossy evergreens, and the infinite variety of spring-blooming plants. They at once assume a warm and cheerful appearance, and cannot fail to be appreciated by all, more particularly by those who, from their migratory habits, only enjoy their country seats for a month or two during winter. During open weather, levelling and turfing repairs, and the laying of Box-edgings should be seen to. Keep the grass free from worm-casts, and smooth by constant rolling, and the walks firm, for dry solid walks are indispensable to comfort. If severe frost sets in, see to the efficiency of the protecting materials employed; *Magnolias*, *Standard Bays*, *Laurustinus*, &c., should have their stems protected. Remember also that the roots of tender plants are as liable to suffer as the tops. Prune and nail *Hardy Creepers*, tying-in such as are upon pillars or lattice-work.

*Shrubberies:* The weather having hitherto been so favourable, planting should be in an advanced state, and what may yet remain to be done should be pushed forward without delay, bearing in mind that the draining and preparation of the ground is important to insure anything like satisfactory results. More particularly in the renovation of old Shrubberies, does deep cultivation, adding materials likely to produce a rich and fertile element, become essential to insure luxuriance of growth; but it should be remembered that the tracing-out and retaining unmutilated as many of the fibrous roots as possible, is important in facilitating re-establishment. When established, shrubberies should never be dug, as no digging or forking will benefit them; moreover, when once the foreground is judiciously furnished, the soil should be entirely hidden from view.

*Roses:* The sooner these are now got and planted the better. Standards must be staked as planted, mulching the surface with rotten dung. Tea and Bourbon Roses must be protected; dwarfs may be pegged down and covered with fern. Tender sorts upon walls or pillars should have a slight covering, perhaps for appearance' sake. Spruce branches or yew, which answer well, are the least objectionable, as everything that is unsightly in the shape of protecting materials must be avoided.

*Conservatory:* Flowering plants are at this season of the year more highly cherished than at any other time, as there is a scarcity of out-door blossoms, and to meet successfully the large and growing demand for flowering-plants and cut-flowers. Previous preparation and forethought are necessary, since we have an abundance of plants of the most varied and effective description applicable to this purpose. *Camellias*, such as the Double White, Comte de Paris, Imbricata, &c., will now be in bloom without forcing, and will stand in a healthy atmosphere free from damp for a far longer period than they will do at a more advanced season. The general stock should be kept as quiet as possible for the present, being carefully looked over and cleansed of scale, should it exist upon them; while just sufficient water is given to keep the soil in a healthy state, with free circulation of air. A genial temperature must be afforded to the great majority of plants in bloom, so that the conservatory night temperature should be kept at 50°, rising 5° or so during the day; if it is allowed to drop below that, the beauty of any tender plants will be of short duration.

*Forcing-house:* This important structure must now be kept in good working order; and to lessen the necessity for so much fire-heat, it will be found more congenial to the majority of the plants to depend as far as possible upon fermenting material, which will avoid the scorching influence of the hot-water pipes, and promote the genial character of the temperature. Examine *Bulbs* that are buried in ashes, and remove such as are rooted. The *Narcissus* is apt to push its roots to the surface when not removed in time, and thus experiences a severe check when removed; introduce fresh batches in succession, and keep such as are showing flower near to the glass. Bring forward a good supply of *Lily of the Valley;* one can never have too many of these. I do not know that imported clumps are at all or much superior to well-grown and ripened English roots. In lifting, cut them into squares to fit into boxes a foot or so in width, and a yard in length, disturbing the roots as little as possible, packing them firmly in the boxes with light soil, and bringing them forward in a dark cellar, or mushroom-house, as they start more freely when kept dark. Previous to starting, *Amaryllises* should be carefully shaken out of the old soil, and potted in ample drained pots, in equal parts of sandy loam and leaf-soil, and afterwards plunged in a mild bottom-heat, near to the glass, withholding water until they are well started, when they will require watering freely as they develop themselves. These much neglected and showy subjects are well worthy of a more extended cultivation.

*Greenhouses:* Large specimen-plants must have frequent attention, to guard against their becoming unnaturally dry at the root, which they are apt to do when surface-sprinkling is adopted—a most unsafe practice, often resulting in serious loss. It is well to bear in mind that, under natural conditions, but very few plants are parched at the root when at rest. Vegetation is not, as one might be led to suppose by the treatment pursued, brought to comparative rest so much by extreme drought as by decline of temperature. The earliest batch of *Herbaceous Calceolarias* should now have the final shift, using a rather heavy loam, enriched with rotted cow-dung and sand. After potting, place them in a cool airy pit near to the glass, and when the roots take fresh hold of the soil they will require strict attention as to watering, for if they become dry at any time, they will most assuredly become the prey of insects, and worthless. Green-fly must be kept under by timely fumigations, or by dipping the foliage in tobacco-water.

*Bedding Plants:* Keep such as are wintered in cold pits as dry as possible, watering very sparingly at the root, and airing freely when the atmosphere is dry, the object being as far as possible to preserve a dry state of atmosphere. Protect *Auriculas* from frost, giving air freely in accordance with the state of the weather. For general stock, see previous directions.—GEORGE WESTLAND, *Witley Court.*

## FRUITS.

*Vinery:* The temperature of the early house started last month should be gradually increased; at present it may range from 50° to 55°, and 60° by the end of the month—in the day 15° higher during bright weather, at the same time giving air; do not hurry them in dull, cloudy weather. Syringe and tie-in the shoots as they advance, and stop one joint above the show for fruit. Prepare the second house for starting. Fruiting *Vines in Pots* will admit of more rapid forcing than established Vines, in consequence of both root and branch being in the same temperature; therefore for these 5° may be added to the temperature above stated.

*Cherries and Plums:* If *early* fruit is required, the trees should be placed in the *early* house by the end of the month. Top-dress the pots with loam and dung, if not done as advised last month. Begin with a night temperature of 45°, and keep a moist atmosphere by syringing the trees every night and morning. Very little water at the root will be needed at the commencement of forcing.

*Strawberries:* About the end of the month, some plants of the early varieties, such as *Black Prince* and *Vicomtesse Héricart de Thury*, may be placed in the forcing-house, where the heat is moderate; do not water them at first, except they are very *dry*. Protect those in pots outside from frost and wet by the means formerly advised.

*Peaches and Nectarines:* Cover the outside borders with leaves or litter, for the purpose of excluding frost and heavy rains. If the early house was started last month, take care that the night temperature does not rise over 50°, for it must be remembered that these fruits will not admit of rapid forcing in the early stages of the process; therefore fire-heat should be applied with caution, otherwise the blossoms will be weakly, and apt to drop. The day temperature may range 10° to 15° higher, according to the state of the weather. Give air at every favourable opportunity; syringe the trees, and close the house early in the afternoon. When the bloom begins to expand, less moisture and more air should be admitted. Prune and tie-in the trees in the next house, and prepare for starting it by the end of the month.

*Pines:* All succession plants in dung-pits that are not otherwise heated should have the linings renewed, so that the top-heat may not fall below 65°, with a bottom-heat of about 75°; no syringing should be permitted, nor very little water given at the root during the dark winter months. Give air in mild weather, more especially if the pits are damp; cover with mats every night. In the fruiting-pit, where the fruit is swelling, the plants should not be allowed to get dry, and a high, moist temperature must be maintained; syringe and close the pits early in the afternoon. Collect plenty of leaves, to be in readiness for use by and by.

*Hardy Fruit:* Proceed with the pruning and nailing of all hardy Fruit-trees at all times when the weather permits, beginning with *Pears*, *Plums*, and *Cherries.*

If any scale or moss infest the trees, they should be dressed with a mixture of soft-soap, urine, and soot. Prune *Currants* and *Raspberries*, and when finished, give them a good dressing of rotten manure, which is to be forked in between the trees. Trench and manure ground for new plantations, as well as for *Strawberries* to be planted in spring. Protect *Figs* from frost by covering the branches with fern or mats. See last month's directions in regard to planting all kinds of Fruit-trees; this still may be done in mild open weather, but if much wet or frost should set in, the operation had better be deferred until the spring.

The *Fruit Room* will require looking over often, and all decayed or spotty fruits should be removed. No air or light need be admitted after this time, except the store-room is damp, when air should be admitted on dry days.—J. POWELL, *Frogmore.*

## VEGETABLES.

Little can be added to the suggestions of the past two months, in reference to kitchen-garden work. It may, however, be said that no department in any garden should present through the dull winter months, a more neat or tidy appearance. Good sound clean walks, adapted for free and unobstructed pedestrianism, being of the first importance, these should be secured at all cost, as it is impossible to enjoy the garden without them. Happily associated as it is with the fruit department, there is in connection with this latter much to impart interest, and render a garden interesting, irrespective of vegetable and salading crops. Any contemplated alterations, whether in regard to Walk-making, Fence-fixing, or Hedge-planting, should be pushed forward with the utmost despatch. So also, and I say it without wishing to encroach on the province of my estimable fellow-workman Mr. Powell, must attention be given to all fruit-tree removal and planting. As, however, I shall anticipate a visit from Mr. Powell, spade or fork in hand, intent on planting some kinds of trees, I shall leave the subject, with the friendly hint that I would see him as quickly through all his probable pruning and nailing operations, &c., as possible, in order that I may suggest that all wall-borders, &c., be dug up immediately after his suggestions have been acted on; and that *Lettuce* or *Endive* (planted in more exposed sites, but which in consequence of the mild autumn have grown unduly large and succulent) may again, should the weather prove mild, be taken up carefully and transferred to the foot of sunny-aspect walls. Plant the *Lettuce* moderately deep, and the *Endive*, should it be of moderate size, with its crown well down in the soil, by which means a nice white heart will form without any additional covering.

Look carefully through the crop of *Onions*, as amongst the stock at this season, following the sweating they always have to undergo at storing, some few are certain to decay, and so prove a source of injury to the others.

The necessary fermenting materials placed upon *Seakale* must be watched, to see that the heat does not exceed a moderate mean of about 80°, or the crowns will be liable to injury by scalding, owing to undue heat. Other crowns should be covered with duplicate pots and materials, to insure a successional supply at the proper season. Those who make a rule of forcing the crowns by taking them up and placing them in a darkened corner of a mushroom-house or other similarly warm place will, it is not necessary to add, dispense with this latter practice; but it may not be unnecessary to suggest in their case that a successional batch of crowns must be brought in to maintain a constant supply. Be careful not to keep up too high a night-temperature in *Cucumber-houses* proper, as nothing tends to enervate the plants or destroy their continued robustness more than this. If a little air be given at the apex of the house on all mild nights, it will prove of great benefit to them.—WILLIAM EARLEY, *Valentines.*

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